THE NATURAL HISTORY OF BRITISH SHELLS,

INCLUDING

FIGURES AND DESCRIPTIONS

OF ALL THE

SPECIES HITHERTO DISCOVERED IN GREAT BRITAIN,

SYSTEMATICALLY ARRANGED

IN THE LINNEAN MANNER,

WITH

SCIENTIFIC AND GENERAL OBSERVATIONS ON EACH.

VOL. I.

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THE

NATURAL HISTORY

OF

BRITISH SHELLS.

INTRODUCTION.

VERMES.

THIS class of Animals was formerly confounded with Insects and Plants: the *Intestina* and *Mollusca* were referred to the first class: the *Zoophyta* and *Lithophyta* to the latter; and some Authors had even classed the *testacea*, or Shells, as a branch of Mineralogy, without regarding the Animals inhabiting them. Linnæus, in the *Systema Naturæ*, comprehends the whole of these creatures in the last class of Zoology; and forms their classical character from their internal structure, as in larger and more perfect animals: COR uniloculare, inauritum; *Sanie* frigida, albida. Tentaculatis *Vermibus*. Heart furnished with one ventricle, without auricle; *sanies* cold and whitish, or colourless. The five orders of the Linnæan class *Vermes* are thus defined:—

Intestina, simple, naked, destitute of limbs.

Mollusca, simple, naked; but not without limbs.

Testacea, animal with a calcareous covering.

Lithophyta, animal composite, affixed to, and fabricate a calcareous base.—Coral.

Zoophyta, a vegetating stem like a plant; animal composite, and resemble flowers.

Linnæus has included in the *Testacea* Order the whole tribe of Shells. In the generic characters he regards both the Shell and its inhabitant: in the definition of species, the former only is attended to. There are very strong arguments against the method of arranging this tribe by the Animals, although it cannot be denied, that the Shells are only the coverings or habitations, and should not demand our primary attention *.

The TESTACEA are Vermes of the soft and simple kind, and are covered with a calcareous habitation. These are separated into three divisions, according to the number of valves of which the Shell consists. The first division includes only three genera, *Chiton*, *Lepas*, and *Pholas*; these are called Multivalves, and are formed of many valves, or pieces, disposed transversely on each other. The second division consists of Bivalves, or Shells of two pieces, connected together with a hinge, or cartilage. The third division is of Univalves, and have the Shell complete in one piece, as the word implies. The Linnæan genera are—

* Vide DONOVAN's Instructions for collecting and preserving Subjects of Natural History. London, 1794.

Multivalvia.

CHITON.	LEPAS.	PHOLAS.

Bivalvia : conchæ.

MYA.	SOLEN.	TELLINA.
CARDIUM.	MACTRA.	DONAX.
VENUS.	SPONDYLUS.	CHAMA.
ARCA.	OSTREA.	ANOMIA.
MYTILLUS.	PINNA.	

Univalvia.

spira regulari COCHLEAE.

ARGONAUTA.	NAUTILLUS.	CONUS.
CYPRAEA.	BULLA.	VOLUTA.
BUCCINUM.	STROMBUS.	MUREX.
TROCHUS.	TURBO.	HELIX.
NERITA.	HALIOTIS.	

sine spira regulari.

PATELLA.	DENTALIUM.	SERPULA.
TEREDO.	SABELLA.	

Pecten

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PLATE I.

FIG. I. I. I. I.

OSTREA VARIA.

VARIEGATED, OR ONE-EARED SCALLOP.

GENERIC CHARACTER.

Animal a Tethys. Shell bivalve unequal. The hinge without a tooth, having a small oval cavity.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell almost equally convex; about thirty rays, scabrous, imbricated, or beset with transverse scales. One ear *.

OSTREA VARIA testa æquivalvi: radiis triginta scabris compressis echinatis uni aurita. *Gmel.—Linn. Syst. Nat.* 3324. 48.

P. subrufus, striis viginti quatuor, ad minimum donatus.—P. parvus, ex croceo variegatus, tenuiter admodum striatus, alternis fere striis paulo minoribus. *List. H. Conch.*

Pecten minor nostras, striis plurimis minoribus. *Mus. Petiv. p.* 86. *No.* 830.

Pectunculus echinatus fusco purpureus. *Borlase Corn. p.* 277.

* It has two ears, but one is considerably larger than he other.

PLATE I.

Pecten varius: variegated scallop. *Pen. Br. Zool. No.* 64. *tab.* 61. *fig.* 64.

PECTEN MONOTIS: ONE EARED ESCALLOP. Parvus angustior, æquivalvis, inæqualiter auritus, strigis echinatis. *Da Costa. Tab.* 10. *fig.* 1. 2. 4. 5. 7. 9.

Many beautiful kinds of this species are found on our coasts. Some are of an uniform, obscure, reddish, or purple colour, without any markings: some are violet, and others bright yellow, or orange. The most elegant kinds are variegated with different colours, as white, red, purple, and brown. The purple kind marbled with irregular spots, and waves of white; and the coral red, with black and white markings, and white on the upper part, are select specimens of these elegant varieties.

Pennant says, this species is often found in oyster-beds, and dragged up with them. "It is frequent on most of the shores of England; as in Wales; at Margate, and Sheerness, in Kent; in Sussex and Dorsetshire; in Devonshire; at Lelant and Whitsand Bay, &c. in Cornwall; the ostium of the river Aln in Northumberland, and many other places." *Da Costa.*

PLATE I.

FIG. II.

PECTEN OBSOLETUS.

GENERIC CHARACTER.

Ostrea. *Linn.*

SPECIFIC CHARACTER AND SYNONYMS.

One large striated ear, with smooth equal shells; eight *obsolete* rays; of a dark purple colour. *Penn. Br. Zool. No.* 66. *tab.* 61. *fig.* 66.

PECTEN PARVUS: parvus fuscus longitudinaliter striatus, *Da Costa. Br. Conch.* 153. 8.

This is a very rare species; da Costa received his specimen from Cornwall.

The valves are equal and shallow; the shell thin, and semitransparent; the ears unequal, one being very small. The inside is smooth and brown, with a pearly gloss. The outside is a dull purplish brown, with numerous fine longitudinal striæ *, eight or ten of which are more prominent than the rest. These are surely not the *obsolete* rays of Pennant, as da Costa imagines; the former author must allude to the intermediate rays which are depressed and appear worn, as he describes them.

* The figure in Pennant's work is represented with transverse striæ; this appears, however, to be an error of the engraver.

Turbo

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PLATE II.

FIG. I. I.

TURBO CIMEX.

LATTICED WHELKE.

GENERIC CHARACTER.

Animal Limax. Univalve, spiral, or of a taper form. Aperture somewhat compressed, orbicular, entire.

SPECIFIC CHARACTER AND SYNONYMS.

Shell oblong-oval. Striæ decussate, or intersect each other in a spiral direction.

TURBO CIMEX, testa oblongo-ovata, striis decussatis: punctis eminentibus. *Lin. Syst. Nat. p.* 1233. *No.* 609.

Turbo Cancellatus, *Latticed*. Turbo minimus albus cancellatim vel decussatim striatus. *Da Costa Br. Conch.* 104. 60. *tab.* 8. *fig.* 6. 9.

The natural size of this shell is shewn at Fig. I. together with its microscopic appearance. It is a very small species, thick, without

gloss. The striæ are elevated, broad, and cross each other so as to form a deep latticed-work of thick ridges. This species is noted from Cornwall and Guernsey: it is also found in the Mediterranean.

FIG. II. III. IV. VI. V.

TURBO PULLUS.

PAINTED WHELKE.

GENERIC CHARACTER.

Animal Limax. Shell univalve, spiral, or of a taper form. Aperture rather compressed, orbicular, entire.

SPECIFIC CHARACTER AND SYNONYMS.

TURBO PULLUS. Turbo testa imperforata ovata lævi, apertura antice diducta. *Linn. Syst. Nat. p.* 1233. *No.* 610.

Turbo minimus lævis, variegatus, albo rubicundus. Small red and white variegated Whelke. *Borlase Cornw. p.* 277.

Painted, Turbo pictus. Turbo minimus lævis, albo et rubro perbelle pictus, *da Costa, p.* 103. 59. *tab.* 8. *fig.* 1. 3.

A minute, but elegant species; it is a very delicate shell, thin and transparent, smooth and glossy. The varieties are numerous; gene-

rally white or blush-rose colour, with the markings crimson or reddish purple, disposed in zones, spiral circles, transverse streaks, irregular waves, lines, spots, and specklings. Some are variegated with different shades of brown in a similar manner.

Fig. II. represents the natural size: Fig. III. a full grown specimen. Fig. IV. IV. IV. are elegant varieties, as they appear under the microscope. Da Costa notes this species from the coast of Cornwall, and from Exmouth in Devonshire.

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PLATE III.

FIG. I*. I. I.

PATELLA PELLUCIDA.

BLUE RAYED LIMPET.

GENERIC CHARACTER.

Animal Limax. Shell univalve, subconic, without spires.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell entire, gibbous, pellucid, marked with longitudinal blue rays.

PATELLA PELLUCIDA: testa integerrima obovato gibba pellucida: radiis quatuor cæruleis. *Gmelin. Lin. Syst. Nat.* 3717. 153.

Patella minima lævis pellucida, aliquot cæruleis lineis eleganter insignita. *List. Hist. Conch. tab.* 543. *fig.* 27.

Patella minor, fusca, tenuis, umbone nigro ad extremitatem anteriorem detruso, tribus inde lineis cæruleis per dorsum decurrentibus pulchre distincta. *Wallace, Orkneys, p.* 41.

Patella Anglica parva, prætenuis cymbuliformis, lineis cæruleis guttatis. *Mus. Petiv. cent.* 8. *p.* 68. *No.* 725.

PLATE III.

Transparent Patella. *Br. Zool.* 4. *No.* 150. *tab.* 90. *fig.* 150.
Patella Lævis. Smooth Patella. *Br. Zool.* *No.* 151. an *old shell.*
Patella Cæruleata. Blue rayed. *Da Costa.* *Br. Conch.* 7. 4. *tab.* 1. *fig.* 5. 6.
Lepas d'eau douce demi-ovoide transparent, a trois lignes bleues. *D'Avila*, *tab.* 1. *p.* 428. *No.* 962.

In the young state, this shell is very transparent and horny, the aperture ovoid, and the margins smooth and level; it has also several longitudinal lines of bright blue colour, which extend from the vertex down the back to the margin. According to Linnæus, these should be four in number; some authors say five, and *Borlase* mentions nine. The blue colour is disposed in spots in some specimens; in others in lines; and again in some others in short and interrupted dashes. Linnæus observes that the bright blue colour has not been found in any Shell except this.

The old shells are very different from the young ones, and have been mistaken by some Authors for distinct species. The young shell is remarkable for its pellucidity. The old ones are thicker and larger: the aperture irregular: the vertex two-thirds of the shell; and the rays of blue, dusky. Fig. I. * represents the natural size.

The Shell is found on the coast of Cornwall, and on the Dorset coast, near Weymouth. *Martin*, *Sibbald*, and *Wallace*, received it from the western isles of Scotland and the Orkneys.

PLATE III.

PATELLA FISSURA.

SLIT-LIMPET.

GENERIC CHARACTER.

Animal limax. Shell univalve, subconic, without spires.

SPECIFIC CHARACTER
AND
SYNONYMS.

Oval, striated, reticulated. Vertex recurved, or bent back. A slit in the anterior part.

Patella Fissura : testa ovali striato-reticulata : vertice recurvo, anterius fissa. *Gmelin, Linn. Syst. Nat.* 3728. 192.

Patella integra parva, alba, cancellata, fissura notabili in margine. *List. H. Conch. tab.* 543.
Petiv. Gaz. tab. 75. *fig.* 2.

Patella testa sulcato-reticulata, vertice recurvo, margine antice sursum fisso. *Müller-zool-dan.* 1. *p.* 83. *t.* 24. *f.* 7. 9.
rar. 1. *p.* 51. *prodr.* 2864.

Patella fissura. Slit. *Br. Zool. t.* 90. *f.* 152. *p.* 144.
Da Costa Br. Conch. 11. 5. *tab.* 1. *fig.* 4.

Lepas d'eau douce reticulé, avec une petite fente, ou entaille. *D'Avila, Cab.* 1. *p.* 428. *No.* 962.

Found on the coasts of Cornwall and Devonshire.

PLATE IV.

STROMBUS PES PELECANI.

CORVORANT'S FOOT.

GENERIC CHARACTER.

Animal a slug. Shell univalve, spiral. The aperture much dilated, and lip expanding into a groove.

SPECIFIC CHARACTER AND SYNONYMS.

Lip expanded, divided into four fingers or prongs.

STROMBUS PES PELECANI: testa labro tetradactylo palmato digitis angulato, fauce lævi. *Gmel.—Lin. Syst. Nat.* 3507. 2.

Cochlea testa longa acuminata, aperturæ labro dilatato, duplici stria antice sinuato. *Lin. Fn. Suec.* 1. *p.* 378. *No.* 1323.

Aporrhais Quadrifidus. Four-fingered. Aporrhais subfuscus, anfractibus nodosis, labro palmato quadrifido. *Da Costa Br. Conch.* 136. 80. *Tab.* 7. *fig.* 7.

Buccinum bilingue striatum labro propatulo digitato. *Lister II Conch. tab.* 8. 65. *fig.* 20.

Strombus canaliculatus, rostratus, ore labioso, striatus, papillosus, auritus aure admodum crassa, et in quatuor appendices breviores expansa, ex candida cinereus. *Gualt.* 1. *Conch. tab.* 53. *fig. A.*

PLATE IV.

Aporrhais Edinburgicus minor nodoso. *Petiv. Gaz. tab.* 79. *fig.* 6. —*tab.* 127. *fig.* 11.

Strombus Pes pelicani, Corvorant's foot. *Penn. Br. Zool. No.* 94. *tab.* 75. *fig.* 94.

Aile de Chauve Souris femelle, Patte D'Oye, ou Hallebarde. *D'Avila Cab. p.* 191. *No.* 344.

A very singular, but not uncommon shell on some of our coasts, as Cornwall, Devonshire, Durham and Sussex. In Carnarvonshire and Merionethshire, in Wales, on the coast of Scotland, and in the Orkneys.

PLATE V.

HALIOTIS TUBERCULATA.

TUBERCULATED SEA EAR.

GENERIC CHARACTER.

Animal a slug. Shell univalve, dilated, or flat, almost open a row of orifices its length, spire near one end turned in.

SPECIFIC CHARACTER

AND

SYNONYMS.

Oblong-oval. Outside furrowed transversely, rugged, tuberculated.

HALIOTIS TUBERCULATA, testa subovata, dorso transversim rugoso tuberculato. *Gmel.—Linn. Syst. Nat. Conch. p.* 3687. *sp.* 2.

Auris marina, major profunde sulcata, magis depressa, fusco colore obsita, intus argentea. *Gualt. Ind. Conch. tab.* 69. *fig.* 1.

Auris marina quibusdam: Patelli fera Rondoletii, λεπὰς ἀγρία Aristotelis; Mother of Pearl, Anglice. *List. H. An. Angl. p.* 167. *tit.* 16. *tab.* 3. *fig.* 16.

Tuberculated Sea Ear. *Pennant Br. Zool. No.* 144. *tab.* 88. *fig.* 144.

Haliotis Vulgaris. Common Sea Ear. *Da Costa, Br. Conch. p.* 15. *pl.* 2. *fig.* 1, 2.

Pennant says this species is frequently cast upon the southern coast of Devonshire. It is common on the eastern coast of Sussex; and on the coast of the isle of Guernsey.—It adheres like limpets, to the rocks, when living.

PLATE VI.

CARDIUM ACULEATUM.

SPIKED COCKLE.

GENERIC CHARACTER.

Two teeth near the beak; and another remote one on each side of the shell.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell nearly heart-shaped. Ribs high, sulcated down the middle, and beset with long canaliculated spines.

CARDIUM ACULEATUM: C. testa subcordata: sulcis convexis linea exaratis: exterius aculeato ciliatis.—*Gmel. Linn. Syst. Conch. p.* 3247. 7.

Pectunculus maximus insigniter echinatus. *Wallace, Orkney. p.* 44.

Cœur de bœuf. *Argenville. Conch. I. p.* 335. *fig. B.*

Cœur de bœuf Epineux. *D'Avilla Cab. p.* 355. *No.* 817.

Concha cordiformis æquilatera, umbone cardium unito, striata, striis latis canaliculatis muricata aculeis longis et acutis, aliquando recurvis in summitate striarum positis, albida, et parvis maculis luteis obscure fasciata. *Gualt. I. Conch. tab.* 72. *fig.* A.

Cardium Aculeatum. Aculeated. *Penn. Br. Zool.* 137. *tab.* 50. *fig.* 37.

Cardium Aculeatum, Spiked Cockle, A. *Da Costa, Br. Conch. p.* 175.

PLATE VI.

This is the largest of the Cardium, or Cockle genus, th
[illegible] of the British shores. It is noted by Wallace as a Sh
[illegible] and also by Pennant, who likewise found it o
[illegible] —It is a thick shell, with high radiated ribs, and beset
[illegible] which are hollowed. It is covered wit
[illegible] of a [illegible] colour, varied with light browns; t
[illegible] is white, with a faint tint of red, or rose colour.—
[illegible] inches and an half.

This is one of the six new species Da Costa could not p
[illegible] which he alludes in the preface*.

* [illegible] the shell from the species themselves, except in six in
[illegible] the original in [illegible] the series; in which case I h
[illegible] and the Reader will find these species fig
[illegible]


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PLATE VII.

LEPAS ANATIFERA.

ANATIFEROUS ACORN SHELL.

GENERIC CHARACTER.

Animal. triton. Shell of many unequal valves; affixed by a stem.

SPECIFIC CHARACTER

AND

[illegible]s.

Shell compressed, consists of [illegible], [illegible] to a pedicle, or membr[illegible]

LEPAS ANATIFERA, testa [illegible]ompressa quinquevalvi lævi pedunculo insidente. *Gmel[illegible]n. Syst. Nat. Conch. p.* 3211. 13.

Balanus Anatifera compress[illegible] quinquevalvis lævis, tubo seu colle membranac[illegible]o insidente. *Da Costa, Br. Conch.* 253. 72. *tab.* 18. *fig.* 3.

Concha quinquevalvis compressa, tubulo quodam lignis aut algæ marinæ adhærens; animal sui generis multis cirrhis instructum continens, falso dicta anatifera. *Sibbald. Mus. p.* 170. *No* 2.

Lepas testa compressa basi membrana cylindricea. *Fn. Suec. I. n.* 1350.

Lepas Anatifera cum Tritone. *Stalp. Obs.* 2. *p.* 458. *t.* 15. *Osb. it.* 82.


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PLATE VIII.

FIG. I.

TROCHUS MAGUS.

TUBERCULATED TOP SHELL.

GENERIC CHARACTER.

Animal a slug. Shell conic. **Aperture nearly triangular.**

SPECIFIC CHARACTER

AND

SYNONYMS.

Pyramidal somewhat depressed; base umbilicated. The ridges of the spires rising into distinct tubercles.

Trochus Magus, pyramidalis umbilicata; convexa, anfractibus supra marginatis, infra nodulosis.—*Gmel. Linn. Syst. Nat. Conch. p. 3567.—Sp.* 7.

Trochus acuminatus, crebris striis transversis et undatim dispositis donatus. The wavy striated trochus, pearl-coloured. *Borlase Cornw. p.* 278. *tab.* 28. *fig.* 6.

T. magus tuberculated. *Penn. Br. Zool. No.* 107. *tab.* 80. *fig.* 107.

Sabot sorciere. *Argenville Conch. I. p.* 263.

Trochus pyramidalis umblicatus, anfractibus supra marginatis, infra nodulosis, albus, rubro variegatus. Tuberculatus. *Da Costa.* 25. *tab.* 3. *fig.* 1. 1.

PLATE VIII.

This Shell is found on the coasts of Sussex, Dorset, Devonshire, Cornwall, Wales, &c.—It is an elegant species, commonly white; variegated with zig-zag stripes and waves of fine red, as shewn at Fig. 1. Sometimes, however, they are of a dull yellowish tint, instead of white, with the stripes of a dark brown. The Shell is of a rich pearl colour when the outer coat is taken off.

FIG. II. III.

TROCHUS CONULUS.

CONULE.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell conic, imperforated at the base. A prominent wreath along the spires.

TROCHUS CONULUS, testa imperforata conica, lævi, anfractibus linea elevata interstinctis. *Linn. Syst. Nat. p.* 1230. *No.* 598.

Trochus pyramidalis parvus, ruberrimus, fasciis crebris exasperatus. *List. H. Conch. tab.* 616. *fig.* 2.

T. Conulus. Conule. *Penn. Br. Zool. No.* 104. *tab.* 80. *fig.* 104.

Trochus Conulus, Conule. *Da Costa, Br. Conch.* 21. *tab.* 2. *fig.* 4. 4.

Linnæus proposes this as a species, (*Conulus*); but at the same time observes, it may be a small variety of the Trochus Zizyphinus,

because, like that species, it is imperforated, and has a prominent ridge on the whirls. Pennant says, it is scarcely distinct from *T. Zizyphinus*. Da Costa thinks it certainly a distinct species.

If the shell, Fig. 104. Pennant, is correct, it is of a larger growth than any of our specimens. Da Costa says, the size seldom exceeds that of a cherry kernel. Not uncommon on the shores of Sussex; and has been received from the coast of Devonshire.

Fig. II. natural size. Fig. III. magnified.

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SERPULA SPIRORBIS.

GENERIC CHARACTER.

Animal a Terebella, or whimble worm. Shell tubular, adheres to other bodies, as shells, stones, &c.

SPECIFIC CHARACTER AND SYNONYMS.

Small, orbicular, spiral or wreathed like a cornu ammonis; convex above, flat beneath.

SERPULA SPIRORBIS, testa regulari spirali orbiculata: anfractibus supra introrsum subcanaliculatis sensimque minoribus.—*Gmel. Linn. Syst. Nat. Conch. p.* 3740. 5.

Vermiculus exiguus albus nautiloides, algæ fere adnascens. *List. H. Conch. tab.* 533.—*tab.* 553. *Huddesford's edition.*

Very small Worm Shells. *Dale, Harw. p.* 391. *No.* 2. *and p.* 455. *No.* 2.

Depressed orbicular Cochleæ on Algæ. *Wallis. Northumb. I. p.* 402. *No.* 41.

Serpula Spirorbis, Spiral. *Penn. Br. Zool. No.* 155. *tab.* 91. *fig.* 155.

Serpula Spirorbis, Spiral, *Vermiculaire Nautiloide.*—parva orbiculata et Spirali, ammoniæ instar convoluta. *Da Costa Br. Conch.* 12.—*tab.* 2. *fig.* 11.

PLATE IX.

This species is found in abundance on most of the British shores; it adheres to shells, stones, claws of lobsters, &c. but chiefly to the leaves of *Fucus serratus*, and other sub-marine plants. It is a strong Shell, white, and without polish; is never complicated, or laid one on another, but are dispersed singly over whatever substances they are affixed to. Petiver calls it the Wrack Spangle, because it appears like so many white spangles on the dark-coloured leaves of the Wracks.—A piece of this sub-marine plant, with the Shells adhering to it, is a very pleasing object for the opake microscope.

Fig. I. represents the natural size of the Shells. Fig. II. shews one magnified.

Obs. Dr. Lister, in his original edition, ranked this *Shell* among the *Worm-Shells* (tab. 533. fig. 5.) calling it *Nautiloides*, only from its wreathed form like to a *Nautilus*; but his re-editor, the Rev. Mr. Huddesford, has been pleased to reverse the Doctor's *arrangement*, by transposing it to the *Nautilus family*, where it now is (tab. 553), and thereby fixes an error of arrangement on *Dr. Lister*'s memory, which that excellent and accurate conchologist was not guilty of. DA COSTA, *page* 23.


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PLATE X.

PINNA MURICATA.

THORNY WING, OR SEA HAM.

GENERIC CHARACTER.

Hinge without a tooth, and placed on one side. Valves equal; open, or gape at the bottom.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell triangular, striated; the striæ beset with acute, ovated, and concave scales or prickles.

PINNA MURICATA: testa striata, squamis concavis ovatis acutis. *Gmel. Lin. Syst. Nat. Conch. p.* 3364. *Sp.* 4.

Pinna tenuis, striata, muricata. *List. H. Conch. tab.* 370. *fig.* 210.

Pinna fragilis. Brittle. *Penn. Br. Zool. No.* 80. *tab.* 59. *fig.* 80.

Pinna tenuis costis longitudinalibus muricatis. Muricata, Thorny. *Da Costa, tab.* 16. *fig.* 3. *p.* 240.

Pinna recta transversim et directe striata, et rugosa, striis in summitate aculeis exasperatis, ex fusco rubro nigricans. *Gualt.* 1. *Conch. tab.* 79. *fig.* D.

Seb. Mus. 3. *t*, 92. *ser.* 1. *f.*

Concha Pinna. *Hasselq. it.* 447. *n.* 137.

Pinna lata altera. *Rumf. Mus. t.* 46. *f.* M.

PLATE X.

Dr. Rutty mentions a Pinna ten inches long and five broad, caught near the Skerries, in Ireland; and Mr. Pennant "saw specimens of vast *Pinnæ*, found among the farther *Hebrides*, in the collection of Dr. *Walker*, at *Moffat*;" but it is uncertain of what species either of these were: Mr. Pennant says, "they were very rugged on the outside, but cannot recollect whether they were of the kind found in the *Mediterranean* or West Indies*."

The only British species of Pinna we are acquainted with, is the *P. Muricata* of Linnæus, or P. Fragilis of Pennant, and that is very rare. The latter author describes it from a specimen in the PORTLAND cabinet, which had been fished up at Weymouth, in Dorsetshire. Da Costa says, he has seen a very small one (of the same species) from the coast of Wales.—Both of these are represented in the annexed plate.

This Shell is extremely thin and brittle, and gapes open at the broadest end. It is semi-pellucid, and of a horn colour; the outside marked with longitudinal ribs, roughened with rows of small prickles †. The inside is smooth, of a pale horn colour also, with a pearly lustre towards the top.

* This Author, however, arranges it as a new British species, without further description:—as, Pinna Ingens—Great Nacre.

† In Pennant's figure these are obsolete.

PLATE XI.

BUCCINUM LAPILLUS.

MASSY, OR PURPLE WHELKE.

GENERIC CHARACTER.

Aperture oval, ending in a short canal.

SPECIFIC CHARACTER.

Ovated, terminates in a sharp point, spirally ridged. Pillar lip broad.

Buccinum lapillus: testa ovata acuta striata lævi, columella plana albicante.—*Lin. Syst. Nat. p.* 1202. *No.* 481.

Cochlea testa tenua ovata utrinque gibbosa; spiris quinque spiralibus sulcatis; apertura labro undulato. *Plum. Succ. p.* 37[illegible]. *No.* 2101.

Buccinum minus, albidum, asperum, intra quinas spiras fuscum. *List. H. An. Ang. p.* 158. *tit.* 5. *tab.* 3. *fig.* 3.

Buccinum brevi rostrum supra modum crassum, venosissimum, labro denticulato: Purpura Anglicana. *List. H. Conch. tab.* 965. *fig.* 18.—Et B. brevi rostrum, album denticulo unico ad imam columellam. Purpura Anglicana. *Fig.* 19.

Purple marking Whelke. *Borlase Corn. p.* 277. *tab.* 28. *fig.* 11.

English purple. *Smith Cork. p.* 318.

Horse wrinkles. *Smith Waterford. p.* 272.

Small purple Whelke. *Wallis Northumb. p.* 401.

Buccinum lapillus, Massy. *Penn. Br. Zool.* 4. *No* 89. *tab.* 72. *fig.* 89.

PLATE XI.

Buccinum canaliculatum minus, crassum varicolor, striatum, seu Purpura Anglicana. Purpuro-buccinum. *Da Costa Br. Conch. tab.* 7 *fig.* 1. 2. 3. 4. 9. 12.

This is a strong, thick shell, generally about one inch and a half length, of a full pyramidal shape, with a point acute; it has five spires, furrowed: the ridges of the lower wreath notched, or scaled, and very rough. Within the mouth it has five long parallel teeth.

The colours are various, often of a simple and uniform yellowish brown, sandy, or clay colour; sometimes quite white, or white tinged with violet, and fasciated with yellow or brown; the latter are the most elegant varieties of B. Lapillus.—These shells are found in great abundance near low water-mark, on many of the shores of Great-Britain. It is one of the species that yields the purple dye analogous to the *purpura* of the ancients; and though the value of its dye has been long superseded by the cochineal insect, the shells that produced it are objects of curiosity. The Tyrian purple was the most admired, and is known to have been extracted from a species of the *Murex*; but other purples of inferior lustre are also mentioned by the ancients. Da Costa imagines that the liquor of this Whelke (Buccinum Lapillus) was a valuable purple to the ancient English, and quotes the authority of *Bede*, who lived about the seventh century, for this opinion. "There are," says *Bede*, "snails in very great abundance, from which a scarlet or crimson dye is made, whose elegant redness never fades, either by the heat of the sun, or the injuries of rain, but the older it is, the more elegant*."

* Sunt cochleæ, satis superque abundantes, quibus tinctura coccinei coloris conficitur. Cujus rubor pulcherrimus nullo unquam solis ardore, nulla valet pluviarum injuria pallescere; sed quo vetustior, eo solet esse venustior.—*Bede, Hist. Eccles.* (edit. opt.) l. i. c. i. p 277.

In 1681, Mr. Cole, of Bristol, described the process of extracting the purple of this shell, in the Philosophical Transactions. His account is as follows:

"The Shells being harder than most of other kinds, are to be broken with a smart stroke with a hammer, on a plate of iron, or firm piece of timber (with their mouths downwards) so as not to crush the body of the fish within; the broken pieces being picked off, there will appear a white vein, lying transversely in a little furrow, or cleft, next to the head of the fish, which must be digged out with the stiff point of a horse-hair pencil, being made short and tapering. The letters, figures, or what else shall be made on the linnen (and perhaps silk too) will presently appear of a pleasant light green colour, and if placed in the sun, will change into the following colours, i. e. if in winter, about noon; if in summer, an hour or two after sun-rising, and so much before setting; for, in the heat of the day in summer, the colours will come on so fast, that the succession of each colour will be scarcely distinguished. Next to the first light green, it will appear of a deep green, and in a few minutes change into a sea-green; after which, in a few minutes more, it will alter into a watchet-blue; from that, in a little time more, it will be of a purplish-red; after which, lying an hour or two, (supposing the sun still shining) it will be of a very deep purple-red, beyond which the sun can do no more.

"But then the last and most beautiful colour, after washing in scalding water and soap, will (the matter being again put into the sun or wind to dry) be of a fair bright crimson, or near to the prince's colour, which, afterwards, notwithstanding there is no use of any stiptick to bind the colour, will continue the same, if well ordered,

as I have found in handkerchiefs that have been washed more th forty times; only it will be somewhat allayed from what it was af the first washing. While the cloth so writ upon lies in the sun, will yield a very strong and fœtid smell, as if garlick and assafœt were mixed together."

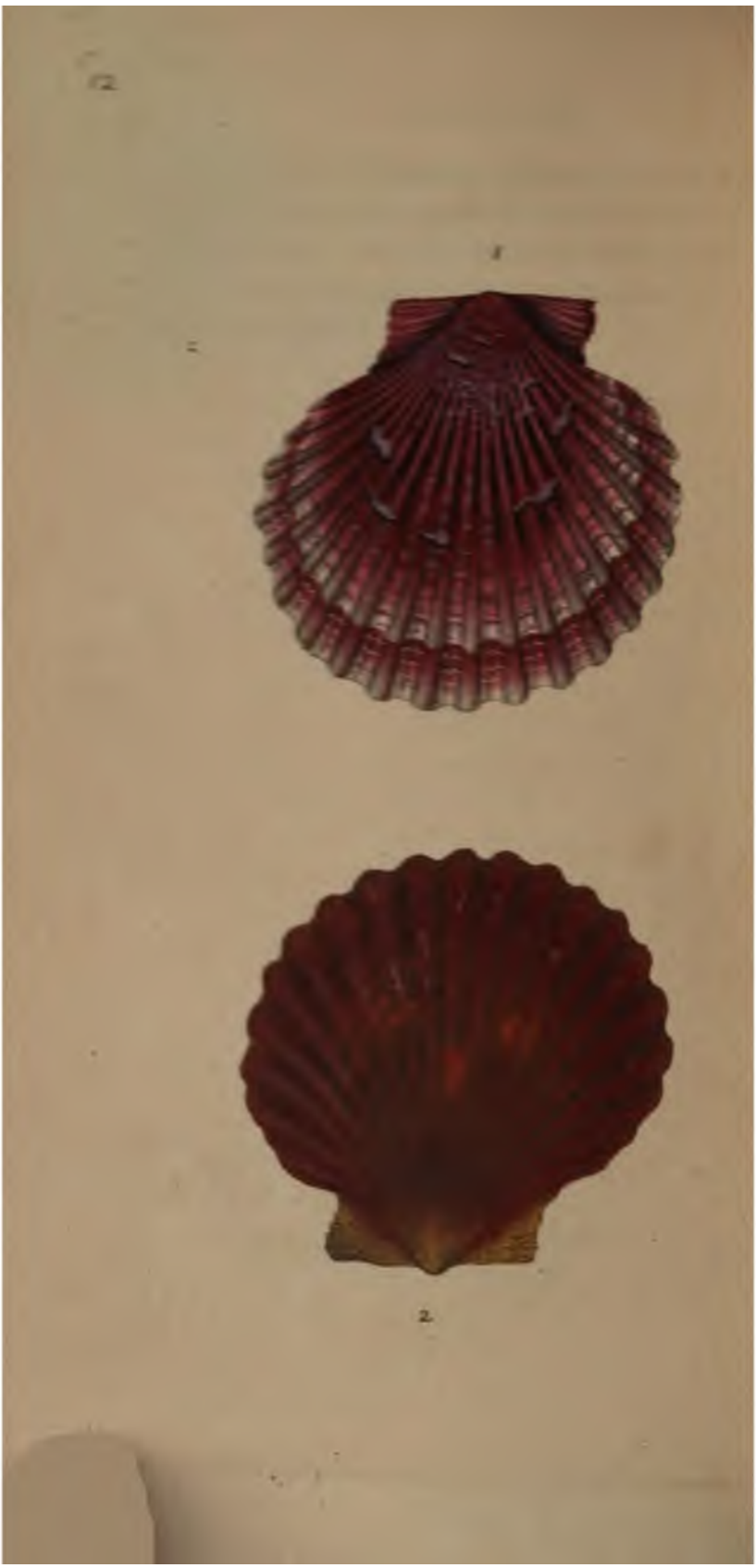

PLATE XII.

OSTREA SUBRUFUS.

GENERIC CHARACTER.

Animal a Tethys. Shell bivalve unequal. The hinge without a tooth, having a small oval cavity.

SPECIFIC CHARACTER AND SYNONYMS.

Shell thin. Twenty longitudinal rays, finely striated; ears unequal; colours various; generally red.

PECTEN TENUIS, subrufus, maculosus, circiter viginti striis majoribus, at lævibus, donatus. *List. H. An. Angl. p.* 85. *tab.* 5. *fig.* 30.

PECTEN SUBRUFUS. *Penn. Br. Zool. No.* 63. *tab.* 60. *fig.* 63.

PECTEN PICTUS: mediocris, fere æquivalvis, tenuis, variis coloribus perbelle variegatus. *Da Costa. Br. Conch. p.* 144. *sp.* 3.

Pectunculus pennatus striis dense notatus, luteo purpurascens. Pecten altis striis albo purpureis transverse variegatis insignis; & Pectunculus purpurascens vittis albis circularibus variegatus. *Borlase Cornw. p.* 277. *tab.* 28. *fig.* 18, 21 *and* 22.

PLATE XII.

This elegent species is found on several of the shores of Great Britain and Ireland, particularly those of Cornwall, Dorset, and Northumberland. It is generally about two inches and an half in length. Shell thin and rather convex. The inside is smooth and glossy, and commonly white, though sometimes of a brownish colour. The colours of the outside very various and beautiful. Da Costa enumerates the chief varieties, as, 1. *almost white*, and *white* charged with *brown*, *red*, or *purple*; 2. *uniform* bright *yellow*, and pale *yellow*, with *white*; 3. *uniform brown*, and *brown*, *red*, or *purplish* grounds with *white*, &c. all these colours are elegantly blended and variegated, sometimes marbled or mottled or disposed in *zones*, *girdles*, broad longitudinal rays, &c.

Fig. 1. represents a fine coloured specimen of the variegated red and white kind. Fig. 2. The uniform deep orange, which we apprehend is less common.

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PLATE XIII.

HELIX NEMORALIS.

GIRDLED SNAIL.

GENERIC CHARACTER.

Aperture or mouth contracted and lunated.

SPECIFIC CHARACTER
AND
SYNONYMS.

Imperforated, subrotund, thin, pellucid. Mouth semi-lunar; generally girdled with streaks: and of various colours.

HELIX NEMORALIS: testa imperforata subrotunda lævi diaphana fasciata, apertura subrotundo-lunata. *Linn. Faun. Suec.* 2186.—*Gmel. Linn. Syst. Nat. Conch. p.* 3647. 108.

Cochlea citrina aut leucophæa, non raro unicolor, interdum tamen unica, interdum etiam duobus, aut tribus, aut quatuor plerumque vero quinis fasciis pullis distincta. *List. H. An. Angl. p.* 116. *tit.* 3. *tab.* 2. *fig.* 3.

Cochlea imperforata, interdum unicolor, interdum variis fasciis depicta. FASCIATA girdled. *Da Costa, Br. Conch. p.* 76. *sp.* 41.

Helix Nemoralis, variegated. *Penn. Br. Zool. No.* 131.

PLATE XIII.

Prof. Gmelin, in the last edition of the Systema Naturæ, enumerates no less than thirty-one varieties of this beautiful land Shell. Da Costa describes six principal varieties in his British Conchology *. Some of the kinds are rare, others extremely common, living in trees, hedges and gardens. It is a widely diffused species being found in every part of Europe as well as Great Britain.

* 1. *Uniform*, of a *pale citron* colour, or *yellow of different shades*: the *mouth* finely bordered within and without, with a dark brown, and with a brownish shade or cloud on so much of the body wreath as lies within the mouth, or from the outer lip quite across to the edge of the pillar. Pretty *frequent*.

2. *Uniform*, of a *flesh colour of different shades*, with the mouth in like manner bordered with dark brown; and the body wreath also shaded exactly the same as the last. Not very *frequent*.

3. *Uniform*, of *different degrees of brown*, with the same circumstances. Common.

4. The *ground yellow* or *greenish yellow of different shades*, with a regular *single* spiral *girdle*, or according to the turn of the wreaths, in the very *middle* of each wreath, with the brown border round the *mouth*, and the shade or cloud on the *body*. Pretty frequent.

5. *The ground flesh colour* of *different shades*, variegated in like manner with a *single girdle*, the *border* round the *mouth*, and on the *body*. *Not very frequent*.

6. *Many* dark-brown spiral *girdles* on the *yellow*, *flesh*, or *brownish grounds*, sometimes to *five girdles* at least on the body wreath; sometimes only *four*. These *girdles* are of different *breadths*, some being very *narrow*, like streaks, others broader, like belts; and others *so extremely broad* as to cover the parts, and make the *ground colour* only appear in *girdles*. They are also not equidistant or regularly set; but *the very broad girdles* lie most generally on the upper part of the shells. These *girdled sorts* are the *most frequent* or *common*. DA COSTA *Br. Conch. p.* 78.

PLATE XIV.

The Limpet is common on all the European shores. The outside is generally encrusted with fucus, balani, &c. beneath which, it has an epidermis of a blackish colour. The shells vary exceedingly in colours, not only in the different stages of growth, but also in the adult state. When young, the colours are remarkably vivid and elegantly disposed: the shell flat and the margins deeply crenated: those of full growth are on the contrary very conic and the colours less brilliant. The margins irregular and the ridges more obsolete. Some authors have considered several varieties as distinct species. Da Costa among others, seems the *Patella depressa* of Pennant, no other than a young variety of the common kind.

PLATE XV.

BUCCINUM LINEATUM,

LINEATED.

GENERIC CHARACTER.

Whelkes whose mouths are cut short at top, for the gutter or beak does not ascend, but bends and falls on the back, oblique or awry, exactly like the mouth of a soal or flat fish. *Da Costa.*

SPECIFIC CHARACTER.

Small, pyramidal, or sharp pointed at bottom. Dark brown, lineated spirally with white.

BUCCINUM LINEATUM: recurvirostrum minimum pullum, lineis albidis spiraliter distinctum. *Da Costa, Br. Conch. p.* 130. *sp.* 77.

This species is found in great abundance on the coast of Cornwall. The annexed plate exhibits several magnified figures of the most elegant varieties, together with the natural size.

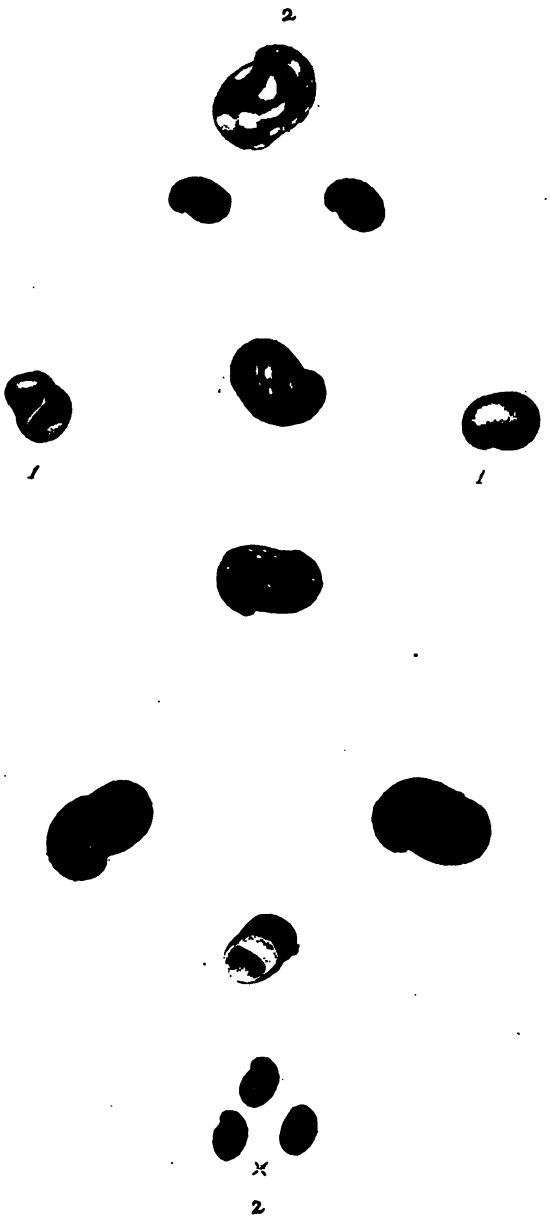
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PLATE XVI.

FIG. I.

NERITA PALLIDULUS.

PALE NERIT.

GENERI[illegible]ACTER.

Globose. A[illegible]rture semiorbicular.

SPECIFIC CHARACTER

Semitransparent. Wreaths [illegible]r prominent. Mouth semilunar, very patulous. Umbilicus large.

Nerita Corneus, spira paululu[illegible]exserta. Pallidulus *Da Costa. p.* 51. *Sp.* 29.

Da Costa says " This species is rare, for I have only received some few shells from the coasts of Kent and Dorset." He also considers it an undescribed shell.

PLATE XVI.

FIG. I. II.

NERITA FLUVIATILIS.

RIVER NERIT.

SPECIFIC CHARACTER,

AND

SYNONYMS.

Small, spotted, streaked, and reticulated.

NERITA FLUVIATILIS; N. testa rugosa labiis edentulis.—*Linn. Syst. Nat. p.* 125. 3. *No.* 723.

Nerita parvus fluviatilis, elegantur maculatus, fasciatus, aut reticulatus. Flaviatilis. *Da Costa Br. Conch. p.* 48. *Sp.* 27.

Nerita fluviatilis, é cœruleo virescens, maculatus, operculo subrufo lunato et aculeato datus. *List. H. An. Angl. p.* 136. *tit.* 20. *tab.* 2. *fig.* 20.

Nerita fluv. exiguus, recticulate variegatus. Small netted Thames nerit. *Muf. Petiv. p.* 67. *No.* 718.

Nerita fluviatilis, River. *Penn. Br. Zool. No.* 142. *tab.* 87. *fig.* 142.

This species is very frequent in rivers. It is small; of an ovoid shape, and very elegantly variegated with black, white, red, green, &c.—The star denotes the natural size of the shell.

PLATE XVII.

VENUS CHIONE.

GENERIC CHARACTER.

Bivalve. Hinge furnished with three teeth; two near each other, the third divergent from the beaks.

SPECIFIC CHARACTER AND SYNONYMS.

Shell smooth with fine transverse wrinkles, a strong cartilage on one slope, and a long pointed oval depression on the other.

VENUS CHIONE: testa transverse subrugosa lævi, cardinis dente posteriori lanceolato. *Gmel. Linn. Syst. Nat. Conch. p.* 3272. *sp.* 16.

P. GLABER, SMOOTH Pectunculus major crassus, politus, castaneus, lucide radiatus. *Da Costa. Br. Conch. p.* 184, *sp.* 22.

Pectunculus maximus crassus, lævis fere radiatus. *Mus. Petiv. p.* 86. *No.* 833.—*Curvirostrum. Leigh. Lancashire. tab.* 3. *fig.* 5.

Venus Chione, β *Rumf. Mus. t.* 42. *f.* G.

Venus Chinone, γ *Chemn. Conch.* 6. *t.* 33. *f.* 334.

"This species," says Da Costa, "is rare in England. I found it at Mount's Bay in Cornwall, where the fishermen told me they call

it *Queen Fish;* it is also found near *Fowey* and other shores of that county. I have seen some from *Weymouth*, and Mr. Petiver received it from the island of Purbeck, in Dorsetshire. Dr. Leigh mentions that it is got on the coasts of Cheshire."

Pennant has not noticed this Shell. Linnæus described it as an Asiatic species in the Systema Naturæ, but adds it is perhaps an European species also. In the last edition by Gmelin, it stands expressly as a British Shell. *Habitat in Mari Britannico, &c.*

This Shell is thick, strong and heavy: the outside smooth and glossy, with numerous concentric transverse wrinkles, and several faint rays in a longitudinal direction. The margins are plain. The inside milk white and glossy.

PLATE XVIII.

TURBO FASCIATUS.

FASCIATED.

GENERIC CHARACTER.

Animal Limax. Univalve, spiral, or of a taper form. Aperture somewhat compressed, orbicular, entire.

SPECIFIC CHARACTER AND SYNONYMS.

Six spires. White marbled or fasciated with black.

TURBO FASCIATUS. Fasciated. *Penn. Br. Zool. No.* 119. *tab.* 82. *fig.* 119.

Buccinum exiguum fasciatum et radiatum. *List. II. Conch. tab.* 19. *fig.* 4.

This is one of the six species Da Costa marks with a roman letter, because he could not procure the originals to figure and describe in the British Conchology. It is figured in the British Zoology of Pennant, who says it is very frequent in *Anglesea*, in sandy soils near the coast.

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PLATE XIX.

FIG. I. I.

TELLINA BIMACULATA.

DOUBLE SPOT TELLEN.

GENERIC CHARACTER.

The hinge usually furnished with three teeth: Shell gat on one side.

SPECIFIC CHARACTER.

SYNONYME.

Subrotund and somewhat triangular, smooth and whitish. Two ol long sanguineous red spots on the inside.

TELLINA BIMACULATA: testa triangulo-subrotunda laticre levi albida: intus maculis duabus sanguineis oblongis. *Linn. F. Suec.* 1135. 2135.—*S. N. p.* 1120.

T. minima levis alba, intus maculis duabus sanguineis oblongis notata. Binaculata. *Da Costa. Br. Conch. p.* 213. 45.

This singular species is found on the shores of Lancashire and Hampshire.

PLATE XIX.

FIG. II. II.

TELLINA TENUIS.

THIN TELLEN:

SPECIFIC CHARACTER
AND
SYNONYMS.

Thin. Subrotund, glossy;—colour sometimes red

TELLINA PLANATA: Concha testa subrotunda glabra incarnata. *Linn. F. Suec.* 1. *p.* 381. *No.* 1335.

Tellina testa-ovata compressa, transversim substriata lævi: marginibus acutis, &c. *S. N. p.* 1117. *No.* 52.

Tellina valde tenuis, parva, subrotunda, plerumque rubra. Tenuis Thin. *Da Costa. Br. Conch. p.* 210. *Sp.* 43.

Tellina parva, intus rubra, ad alterum latus sinuosa. *List. Conch. tab.* 405. *fig.* 250.

Tellina lævis intus et extra rubra, ad latus sinuosa. *Ib. fig.* 251.

Tellina planata. *Plain. Penn. Br. Zool. No.* 29. *tab.* 48. *fig.* 29.

Found on many of our shores, as Kent, Essex, Cornwall, &c. Some of the varieties are extremely delicate, and prettily streaked with pale red and white: many are entirely white, or white tinged with yellow. Some are orange colour; but the rarest kind is deep violet or purple.

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PLATE XX.

FIG. I. I.

NERITA GLAUCINA.

CHAIN NERIT.

GENERIC CHARACTER.

Globose. Aperture semiorbicular.

SPECIFIC CHARACTER
AND
SYNONYMS.

Umbilicated, glossy. Spires swelled, obtuse. Umbilicus large and deep with the inner lip greatly spread on the body wreath. A chain of short brown marks along the spires.

NERITA GLAUCINA: testa umbilicata lævi, spira obtusiuscula, umbilico semiclauso: labio gibbo dicolore. *Linn. Syst. Nat. p.* 1251. *No.* 716.

Nerita Glaucina. Livid. *Penn. Br. Zool. No.* 141. *tab.* 87. *fig.* 141.

Cochlea Catena. Chain Nerit. C. Umbilicata albo rufescens fasciis maculatis, maxime ad imos orbes distincta. *Da Costa, Br. Conch. p.* 83. *sp.* 45.

This Shell is not uncommon on the shores of the Essex and Kentish coasts; on the sandy shores of Lincolnshire, Dorsetshire, Devonshire,

Cornwall, &c. The same species is found in the Mediterranean and the West Indies. The colours are very fine, particularly in the young Shells.

FIG. H. II.

NERITA LITTORALIS.

SPECIFIC CHARACTER AND SYNONYMS.

Shell thick, smooth vertex flat. Inner lip spread obliquely.

NERITA LITTORALIS: T. testa lævi, vertice carioso, labiis edentulis.
Lin. Syst. Nat. p. 1253. *No.* 724.

Nerita vulgaris, unicolor, flavus aurantiacus, vel fuscus, aut fasciatus, aut reticulatim variegatus. Littoralis.
Da Costa, Br. Conch. p. 50. *sp.* 28.
List. H. Conch. tab. 697, *fig.* 39.

Nerita Littoralis. Strand. *Pen. Br. Zool. No.* 143. *tab.* 87. *fig.* 143.

This Shell is very common on all the British coasts, particularly the fine yellow kinds. Those with broad bands or girdles, and also such as are reticulated with dark greenish colour on a light ground, are rare varieties of this species.

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PLATE XXI.

PATELLA HUNGARICA.

LARGE FOOL'S CAP.

GENERIC CHARACTER.

Animal Limax. Shell univalve, subconic, without spires.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell entire, conic, acuminated, striated, with the vertex turning down, or hanging over one side.

PATELLA UNGARICA: testa integra conico acuminata striata vertice hamoso revoluto. *Linn. Syst. Nat. p.* 1259. *No.* 761.

PATELLA HUNGARICA. Bonnet. *Penn. Br. Zool. No.* 147. *tab.* 90. *fig.* 147.

Patella integra, albescens, striata, vertice spirali, intus rosacea. *Da Costa, Br. Conch. p.* 12. *sp.* 6.

Lepas Bonnet de Dragon. *D'Avila, Cab. I. p.* 86. 87. *No.* 32. 34.

"This species is only found on the *Cornish* coast, and even is very scarce there, being most generally dredged some miles from the shore; for the Shell is so thin, that it will hardly bear rolling from its native spot to the beach. It is generally found affixed to a species of *escallops*, called *frills*, in Cornwall." *Da Costa.*

PLATE XXI.

FIG. III. III.

PATELLA RETICULATA.

RETICULATED MASK LIMPET.

SPECIFIC CHARACTER
AND
SYNONYMS.

Small, ash colour, reticulated. Vertex perforated.

P. LARVA RETICULATA. Patella parva cinerea, vertice perforata. *Da Costa Br. Conch. p.* 14. *sp.* 7.

PATELLA GRÆCA. STRIATED. *Penn. Br. Zool. No.* 153. *tab.* 89. *fig.* 153.

PATELLA CLATHRATA. *Klein. Ostrac. p.* 116.—284. *No.* 2. *List. H. Conch. tab.* 527. *fig.* 2.?

Pennant says, this species inhabits the west of England. The specimens in Da Costa's collection were also fished up near Weymouth, in Dorsetshire. This is a rare Shell, and is not known to inhabit any other of the British coasts.

This Shell is about three quarters of an inch in length, half an inch in breadth, and one quarter of an inch in heighth. The outside is deeply reticulated, or wrought with prominent longitudinal and transverse ridges. The vertex inclines to one end, and is perforated; its aperture is of an oblong form, and about one tenth of an inch in length.


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PLATE XXII.

FIG. I. I.

TURBO CINCTUS.

GIRDLED WREATH SHELL.

GENERIC CHARACTER.

Animal Limax. Univalve, spiral, or of a taper form. Aperture somewhat compressed, orbicular, entire.

SPECIFIC CHARACTER
AND
SYNONYMS.

Whitish, variegated with brown. Spires swelled and ridged: two particularly large, broad, roundish ridges, in the middle of each spire.

TURBO CINCTUS: strombiformis medius albus [illegible]o variegatus, anfractibus porcis tumidis la[illegible] cinctus. *Da Costa Brit. Conch. p. 114. sp. 66. Tab. 7. fig. 8.*

Turbo Exoletus. *Linn. Syst. Nat.* ?

This is a very rare Shell. Da Costa says he has received it only from the coasts of Lincolnshire and Lancashire.

PLATE XXII.

FIG. I. & II.

TURBO TEREBRA.

AUGER SHELL.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell slender. Spires twelve, striated spirally. Six of the *striæ* rather prominent.

TURBO TEREBRA: testa turrita, anfractibus carinis sex acutis. *Gmel. Linn. Syst. Nat. Conch. p.* 3608. *sp.* 81.

Cochlea testa longa subulata, spiris, duodecim striatis. *Linn. Faun. Suec.* 1. *p.* 378. *No.* 1322. 2. *No.* 2171.

Buccinum tenue, dense striatum, duodecim minimum spiris donatum. *List. H. An Angl. p.* 161. *tit. tab.* 3. *fig.* 8.

Strombiformis medius albus rufo variegatus, anfractibus striatis. Terebra. *Da Costa Brit. Conch. p.* 112. *sp.* 65.

Turbo Terebra. Auger. *Penn. Br. Zool. No.* 113. *tab.* 81. *fig.* 113.

The colours in this species vary exceedingly; the ground colour is generally white, or cream colour, with the streaks, dots, and markings of brown, pale red, or orange. The length is from one inch and an half to two inches or more.

PLATE XXII.

It is not uncommon on many of the British coasts *. Adanson has a variety of it (β) from Senegal; and other authors mention the same species as a native of the East Indian and African seas.

* This species is not uncommon on many of our coasts, and in great plenty on some, as at the *Scilly Islands*; at *Liverpool*, where they are called Cockspurs; at *Scarborough*, after winter storms, according to Lister; at *Exmouth*, and other places on the western shores; and I have received very fine and perfect ones from the coasts of Wales, as *Flintshire*, *Pwllheli* in *Carnarvonshire*, and *Barmouth* in *Merionethshire*. It is also a Shell of the Orkneys. *Da Costa.*

PLATE XXIII.

MYTILUS MODIOLUS.

GREAT MUSCLE.

GENERIC CHARACTER.

The hinge toothless, and consists of a longitudinal furrow.

SPECIFIC CHARACTER.
AND
SYNONYMS.

Shell large, blackish: one side angulated near the middle, the other straight; but gibbous towards the beaks, and blunted or obtuse at the upper end.

MYTILUS MODIOLUS: testa lævi, margine anteriore carinato, natibus gibbis, cardine sublaterali.—*Gmel. Linn. Syst. Nat. Conch. p.* 3354. *Sp.* 14.

Mytilus magnus nigrescens. Modiolus. *Da Costa. Br. Conch. p.* 219. *sp.* 49. *tab.* 15. *fig.* 5.

Musculus papuanus authorum. *Rumph. Mus. tab.* 46. *fig. B.*

M. Modiolus, Great Mufcle. *Penn. Br. Zool. p.* 113. 77. *tab.* 46. *fig.* 77.

Musculus papaunus. *Adans. Seneg.* 1. *t.* 22. *f. C.*
List. H. Conch. tab. 359. *fig.* 198.
Gualt. test. t. 91. *H. L.*
Rumph. Mus. t. 46. *f. B. C? D?*

PLATE XXIIII.

Mytilus Modiolus is the largest species of this genus that inhabits the British shores; being from six to seven inches in length, and three in breadth. It is a strong and heavy shell; the outside is of a blackish colour inclining to purple. It is covered with a thin filmy brown epidermis, and often with balani and other remains of crustaceous animals. Within, it is smooth and pearly, and sometimes richly coloured with a variety of vivid hues, in which red, purple and green chiefly predominate. These shells lie only in deep waters, and are never cast upon shore; but sometimes they seize the bait of the ground lines, and are hauled up by the fishermen.

Da Costa received the M. Modiolus, of a ſmall size, from the Margate flats in Kent; from Cornwall and other English shores. The specimen figured in the annexed Plate is from Scarborough in Yorkshire; thoſe found on the coast of Wales and Scotland, and particularly the Orkneys, are not inferior in point of size to those from Scarborough.

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PLATE XIV.

DONAX RUGOSA.

PURPLE OR TRUNCATED PURR.

GENERIC CHARACTER.

Bivalve. One side very obtuse, margin crenated. Hinge various, generally of two teeth.

SPECIFIC CHARACTER AND SYNONYMS.

One side very blunt or truncated: thickly striated longitudinally. Margin serrated.

DONAX RUGOSA; testa antice rugosa gibba, marginibus crenatis. *Linn. Syst. Nat. p.* 1127. *No.* 104. *Mus. reg. p.* 494. *No.* 50.

DONAX DENTICULATA: testa anterius obtusissima: labiis transverse rugosis, margine denticulato, nymphis denticulatis. *Gmel. Linn. Syst. Nat. Conch. p.* 3263. *sp.* 6.

Cuneus ex albo & violaceo radiatus, intus vero violaceus, latere altero gibbo & truncato. TRUNCATUS. Truncated Purr. *Da Costa, Br. Conch. p.* 205. *sp.* 40.

Tellina intus ex viola purpurascens, in ambitu serrata. *List. Hist. An. Angl. p.* 190. *tit.* 35. *tab.* 5. *fig.* 35.

PLATE XXIV.

Tellina crassa, admodum leviter striata, intus violacea. *List. H. Conch. tab.* 375. *fig.* 216.—376.—218. 219.

DONAX DENTICULATA. Purple. *Penn. Br. Zool. No.* 46.

This is a very elegant and remarkable species: the annexed Plate exhibits five of its most singular varieties. The young shells are sometimes quite white, or white faintly marked with brown, red or violet; the old shells are of a deep violet without, and variously marked with the same on the outside. Very common on the western coasts of England, and also on those of Ireland and Scotland.

2

PLATE XXV.

FIG. I. I.

MYTILUS DISCORS.

DIVIDED MUSCLE.

GENERIC CHARACTER.

The hinge toothlefs, and consits of a longitudinal furrow.

SPECIFIC CHARACTER.
AND
SYNONYMS.

Shell oval, somewhat diaphanous and horny. Outside divided into three compartments; the two exterior striated longitudinally; the middle transversely, with extremely fine striæ.

MYTILLUS DISCORS: testa ovali cornea subdiaphana, antice longitudinaliter posterius transversaliter striata.—*Gmel. Linn. Syst. Nat. Conch. p.* 3356. *sp.* 21.

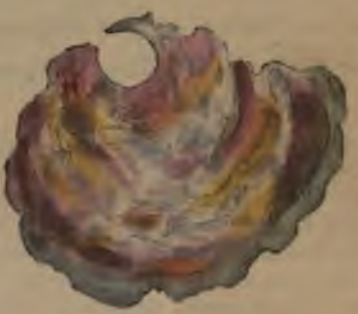
Mytillus minor tenuis areis tribus distinctus. Discors. *Da Costa, Br. Conch. p.* 221. *sp.* 51.

The discovery of this rare species on our coast, is ascribed by Da Costa to Dr. Richard Pultney, F. R. S. of Blandford in Dorfetshire; he found it on an *ascidia* at Weymouth in that county. It

has also been met with in Greenland, Iceland, and Norway; and is likewise noted as a native of the Southern Ocean *.

The shell found on the British coast is very small, brittle, and semi-transparent. The outside is of a brownish or rosy colour, tinged with green. The inside smooth, glossy, and somewhat pearly.

* *Gmelin.*—Probably this variety found in the South Seas is that which *Da Costa* notices in his description of Mytilus discors. "All that *Linné* has *seen*," (of Mytilus discors) "as well as all those found on our *coasts*, are very small, thin, and delicate; but a kind no wise different, except in size and colour, being larger than a great walnut, and quite brown, was brought from the southern hemisphere by that great and national honor, Capt. Cook, the circumnavigator, in the late expedition for the discoveries of new countries. These also were entirely *unknown* to all our collectors; and, as they only differ in *size*, *thickness*, and *colour*, but are exactly the same in structure, way of life, and other particulars as those of our coasts, is it a *distinct species* or *variety* only?"—As a figure of this very analogous kind may be acceptable, it is introduced in the annexed Plate at fig. 2.



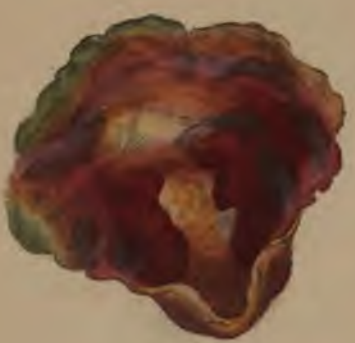


PLATE XXVI.

ANOMIA EPHIPPIUM.

LARGER OR ONION-PEEL ANOMIA.

GENERIC CHARACTER.

Bivalve. Valves unequal: one gibbous towards the beak, the other flat, and perforated near the hinge.

SPECIFIC CHARACTER

AND

SYNONYMS.

Roundish: pellucid, much wrinkled. **Flat valve perforated.**

ANOMIA EPHIPPIUM: testa **suborbiculata rugosa plicata planiore** perforata. *Gmel. Lin. Syst. Nat. Conch. p.* 3340. *sp.* 3.

Anomia. Subrotunda plicata pellucida levis, valva planiore perforata. Tunica cepæ. *Da Costa. Br. Conch. p.* 165. *tab.* 11. *fig.* 3.

Huitre. Pelure d'oignon. *Angenv. Conch.* 2. *p.* 316. *tab.* 22. *fig. C.* 11. *p.* 277. *tab.* 19. *fig. C.*

The perforated Oyster. *Petiv. Mus. p.* 85. *No.* 823.

Anomia Ephippium, larger. *Penn. Brit. Zool. No.* 70. *tab.* 62.

PLATE XXVI.

The Anomia Ephippium is frequently found on the common oyster, to the shell of which it adheres by means of a strong tendinous ligature, which passes through the perforation of the upper valve. This Shell is of an irregular form; the outside rugged and filmy; the inside smooth, pearly, and glowing with a variety of elegant tints. In different specimens the colours vary considerably, some being of a rich purple, others pale red, brown, or deep yellow, and all with a silvery hue.

PLATE XXVII.

BULLA LIGNARIA.

GENERIC CHARACTER.

Shell sub-oval. Aperture oblong, very patulous, and smooth or even. One end rather convoluted.

SPECIFIC CHARACTER AND SYNONYMS.

Oblong, oval, narrow towards one end, and somewhat umbilicated, (or rather convoluted). Striated transversely.

BULLA LIGNARIA: testa obovata oblongiuscula transverse striata, vertice subumbilicato. *Linn. Syst. Nat.*

BULLA LIGNARIA major, leviter et dense transverse striata. *Da Costa. Br. Conch. p.* 26. *sp.* 14. *tab.* 1. *fig.* 9.

Concha veneris major, leviter et dense striata. *List. H. Conch. tab.* 714. *fig.* 71.

Bulla lignaria. Wood. *Penn. Brit. Zool. No.* 83. *tab.* 70. *fig.* 83.

Oublie, ou papier roulé, tonne a bouche entiere. *D'Avila. Cab. p.* 206, *No.* 387.

This species is not very common. It is found on the coasts of Cornwall, Devonshire, and Dorsetshire, and also on several of the coasts of Ireland.

PLATE XXVII.

The length is generally from one inch and an half to two inches; the shell is brittle and without gloss, of a light, brownish colour, wrought transversely, with fine striæ, and many narrow whitish veins. Its Latin and English names are derived from its supposed resemblance to a piece of veined wood.

This Shell is very open; its animal a slug.

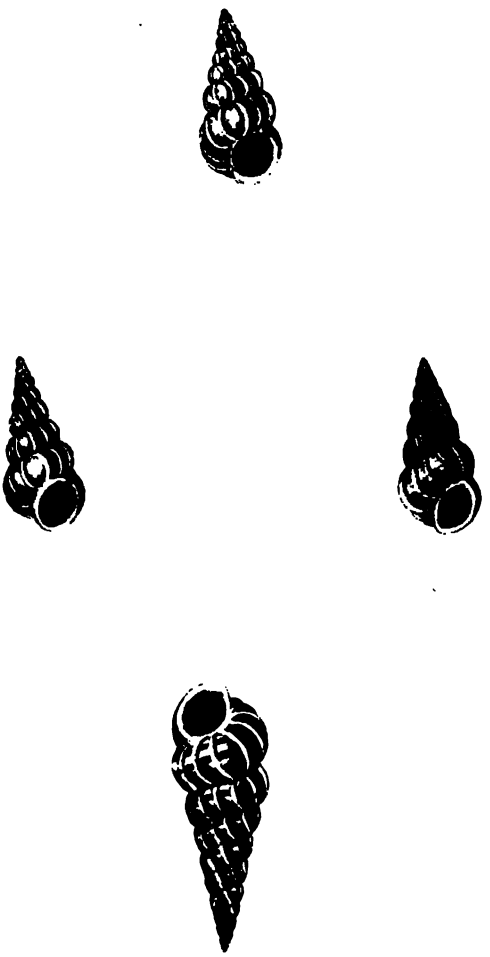


PLATE XXVIII.

TURBO CLATHRATUS.

BARRED or FALSE WENTLETRAP.

GENERIC CHARACTER.

Animal Limax. Univalve. spiral, or of a taper form. Aperture somewhat compressed, orbicular, entire.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell taper, without umbilicus. Spires swelled and separated by a deep channel. Several regular elevated ribs or ridges extend in a longitudinal direction from the aperture to the apex.

TURBO CLATHRATUS: testa turrita ex umbilicata: anfractibus contignis lævibus. *Gmel. Lin. Syst. Nat. Conch. p.* 3603. *sp.* 63.—*Faun. Suec.* 2170.

Strombiformis minor albus aut pullo variegatus, costis longitudinalibus elatis eleganter distinctus. CLATHRATUS. *Da Costa, Br. Conch. p.* 115. *sp.* 67. *tab.* 7. *fig.* 11.

Cochlea variegata, striis raris admodum eminentibus exasperatae. *List. H. Conch. tab.* 588. *fig.* 51.

Turbo Clathratus. Barred Wentletrap. *Penn. Br. Zool. No.* 111. *tab.* 81. *fig.* 111. 111. *A.*

Fausse scàlata. *D'Avila, p.* 221. *No.* 427.

PLATE XXVIII.

This is one of the most singular species that is found on the British coasts. It is very analagous to the famous Scalaris or Wentletrap of the East Indies, which bears such a high price amongst Conchologists; and from this analogy it is called the False Wentletrap. Its length is about an inch, and sometimes two inches or even more. The mouth is perfectly round, and bordered with a thick ring; from this ring arise several distinct equi-distant prominent ridges, generally eight in number, which extend the whole length of the shell in an obliquely longitudinal direction. These ridges appear the more remarkable and prominent, as the spires are very convex or swelled, and separated from each other by a deep spiral channel. The colour of most specimens is milk white, but is sometimes obscured with brown, or marked transversely with distinct circles of ferruginous interrupted lines.

Turbo Clathratus is found on several of the British coasts.

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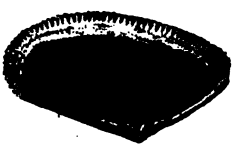

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PLATE XXIX.

FIG. I.

DONAX TRUNCULUS.

BERRAND.

GENERIC CHARACTER.

Bivalve. Frontal margin very blunt.

SPECIFIC CHARACTER,

AND

SYNONYMS.

Shell shallow, glossy. Outside fasciated with brown and purple. Inside purple. Margin crenated.

DONAX TRUNCULUS :- testa antice lævi intus violacea, marginibus crenatis. *Linn. Syst. Nat.*

Tellina subfusca angustior, inter purpurascens. *List. H. Conch. tab.* 376. *fig.* 217.

Cuneus angustior lævis subfuscus vittis purpurascentibus fasciatus vittatus. *Da Costa, Br. Conch. p.* 207. *sp.* 41.

Donax trunculus. Yellow. *Penn. Br. Zool. No.* 45. *tab.* 55. *fig.* 45.

This pretty species is about one inch and a half in length. It is found on the coasts of Essex, Sussex and Cornwall, and also on those of Wales, Scotland and Ireland.

PLATE XXIX.

FIG. II.

DONAX IRUS.

FOLIATED PURR.

SPECIFIC CHARACTER.

Oval. Outside rugged or wrinkled transversely with numerous raised membranous waved laminæ or foliations.

DONAX IRUS: testa ovali, rugis membranaceis erectis striatis cincta. Cuneus parvus albescens, rugis foliaceis et membranaceis erectis transversim cinctus. Foliatus. *Da Costa. Brit. Conch. p.* 204.—*Sp.* 39. *tab.* 15. *fig.* 6.

Found in abundance in Cornwall buried in the sands, and not uncommon on the shores of Dorsetshire.


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PLATE XXX.

FIG. I.

LEPAS BALANUS.

RIDGED ACORN SHELL.

GENERIC CHARACTER.

Animal Triton. Shell of many unequal valves; affixed by a stem.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell conic, deeply furrowed, or wrought with prominent longitudinal ridges. Operculum sharp pointed.

LEPAS BALANUS: testa conica sulcata fixa, operculis acumunatis. *Linn. Syst. Nat. p.* 1107.

Balanus majusculus valvis porcatis. Porcatus. *Da Costa, Br. Conch. p.* 249. *sp.* 69.

Frequent on the British coasts, adhering to rocks, shells, &c.— It is a large and strong species, being seldom less than the size of a filbert, of a conic form and rugged appearance, and is wrought with very prominent longitudinal ridges.

PLATE XXX.

FIG. II.

LEPAS COSTATA.

RIBBED ACORN SHELL.

SPECIFIC CHARACTER.

Shell somewhat conic. Ribs equidiſtant and diverging from the aperture. Operculum sharp pointed.

LEPAS COSTATA: testa subconica operculis acutis: valvulis costatis.

This curious and rare species, which has not been hitherto described or figured, was found by the late T. Adams, Esq. of Pembroke, adhering to pieces of broken rock, and is in the poſſeſſion of the Rev. T. Rackett, of Spetisbury, Dorset, to whose liberality we indebted for figures of this, and several other Britiſh ſhells not included in our own collection.

FIG. III.

LEPAS CONOIDES.

SPECIFIC CHARACTER.

Conic. Smooth, valves pointed at the apex: aperture very small.

LEPAS CONOIDES: testa conica lævi valvulis acuminatis, apertura angustiſſima.

Found by Mr. Bryer of Weymouth, affixed to the Lepas anatifera.

PLATE XXXI.

MUREX DESPECTUS.

THE LARGE OR DESPISED WHELK.

GENERIC CHARACTER.

Spiral, rough. The aperture ending in a strait and somewhat produced gutter or canaliculation.

SPECIFIC CHARACTER
AND
SYNONYMS.

Mouth wide, oval and somewhat elongated and cancellated at the upper end. Spires eight.

MUREX DESPECTUS: testa patulo subcaudata oblonga anfractibus octo. *Gmel. Linn. Syst. Nat. p.* 3547.

Buccinum album læve, maximum, septem minimum spirarum. *List. H. An. Angl. p.* 155. *tit.* 1. *tab.* 3. *fig.* 1.

Buccinum rostratum majus crassum, orbibus paululum pulvinatis. *List. H. Conch. tab.* 913. *fig.* 4.

Murex Despectus. Despised. *Penn. Br. Zool. t.* 78. *fig.* 93.

Buccinum canaliculatum magnum crassum striatum album. MAGNUM. *Da Costa tab.* 6. *fig.* 4. *p.* 120.

This is the largest of the turbinated univalves found in the British seas. It inhabits deep water, and is said to be a common shell on the

Essex, Sussex, and many other of the Englifh shores as well as in Scotland, the Orkneys and many of the Irish shores also. On the Dorset coast it is rare.

It is frequently drawn up with oysters, and is sometimes eaten; but as it is coarse food, it more commonly furnifhes bait to fifhermen.

The largest shells of this sort, found in our seas, sometimes exceeds five inches in length; it is a strong, thick, and heavy shell; of a whitiih colour on the outfide; within of a most lovely yellow, inclining to orange, smooth, and very glofsy.

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PLATE XXXII.

FIG. I.

CARDIUM MEDIUM.

PIGEON'S HEART COCKLE.

GENERIC CHARACTER.

Two teeth near the beak; and another remote one on each side of the shell.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell somewhat heart-shaped, and furrowed longitudinally, retuse on one side.

CARDIUM MEDIUM: testa subcordata, antice retusa longitudinaliter striato sulcata. *Linn. Syst. Nat. n.* 77. ~~p. 1132. List. Conch. t. 316. fig.~~ 152. *Gualt. t.* 83. *f. b. Chemn. Conch. t.* 16. *fig.* 162.—165.

This shell has not hitherto been noticed as of English growth. Our specimen, which differs in no respect from those found in the Mediterranean sea, was found near Hartlepoole, on the coast of Durham.

PLATE XXXII.

FIG. II.

CARDIUM CILIARE.

FRINGED COCKLE.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell roundish, inclining to heart shape. Ribs longitudinal, triangular, and beset along the ridges with thin spines.

CARDIUM CILIARE: testa subcordata, sulcis elevatis triquetris: extimis aculeato ciliatis. *Linn. Syst. Nat. p.* 1122. 80.

Pectunculus albus exiguus, muricibus insigniter exasperatus. *Wallace Orkn. p.* 44.

Pectunculus minimus triquetrus Essexiensis. *Petiv. Gaz. tab.* 93. *fig.* 11.

Cardium parvum tenue, costis triquetris aculeatis. Parvum. *Da Costa Brit. Conch. p.* 177. 17.

Pennant describes this species as having eighteen ribs, and Da Costa about fifteen; we have specimens that agree, in this respect, with the descriptions of both authors. The shell figured by the first is the size of a hazel nut; the latter says, he has never seen it larger than a nutmeg: a worn shell, with the habit of this species, that has been found since, is full twice that size.

This delicate shell is found on several of our coasts, as Cornwall, Dorsetshire, and Devonshire; also in the Orkneys.

PLATE XXXII.

FIG. III. III.

CARDIUM PYGMÆUM.

PYGMY COCKLE.

SPECIFIC CHARACTER
AND
SYNONYMS.

Nearly heart-shaped, somewhat angulated, furrows imbricated or beset with recurvated scales.

CARDIUM PYGMÆUM: testa subcordata, subangulata, sulcis recurvato imbricatis.

Cardium exiguum. *Gmel. Linn. Syst. Nat. p.* 3255. *sp.* 37 ?
List. Conch. t. 317. *f.* 154.
Testacea minuta rariora *t.* 3. *f.* 83.

Size of a large currant, of a reddish brown, or sometimes whitish colour.

Found in Kent, and at Falmouth, in Cornwall


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PLATE XXXIII.

FIG. 1. 2.

TURBO LITTOREUS.

COMMON PERIWINKLE.

GENERIC CHARACTER.

Animal Limax. Univalve, spiral, [illegible] form. Aperture somewhat compressed, orbicular, entire.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell with five spires: the first much swelled, the turban tapering and sharp pointed; striated spirally. Lip thin, and much spread on the pillar.

TURBO LITTOREUS: testa subovate acuta striata, margine columnari plano. *Linn. Syst. Nat. p.* 1232. *No.* 607. *Fn. Sv.* 2. 2169.

Turbo Littoreus, Periwinkle. *Penn. Br. Zool. No.* 159. *tab.* 81. *fig.* 109.

Turbo-pyramidalis crassus fuscus, striis crebris præditus. Littoreus. *Da Costa, Br. Conch. p.* 98. 33.

It is needless to enter into detail on a species so well known as the Common Periwinkle; yet it may be proper to observe, these shells, in many instances, vary considerably. The young shells are reddish,

whitish, yellowish, or brown, of various hues, sometimes uniform, or without any markings; at others, girdled spirally with darker colours. The adults also are sometimes bright red, orange, chesnut, or whitish, or olive, with, and sometimes without, the spiral lineations. They vary no less in size than in colours; and those of the Orkneys, in particular, are quadruple, the size of those on the Irish or English coast.

It is said, the name Periwinkle is a corruption of *Petty Winkle*, or small Winkle, or Whelk.

Fig. I. I., &c. Adult vanities of Turbo Littoreus. Fig. II. II. the young shells.

FIG. III. III.

TURBO RUDIS.

THICK-LIPPED PERIWINKLE.

SPECIFIC CHARACTER.

Shell somewhat tapering, without umbilicus. Volutions of the spires, or turban swelled. Lip thick, and glossy within.

This shell has been kindly communicated by Dr. Maton, as a new species. It is noticed in the first volume of that gentleman's Observations on the WESTERN COUNTIES; but has not, we believe, been hitherto figured. It was discovered on the banks of the Tamar, in Devonshire, near Bere-Alston, and is thus described;

PLATE XXXIII.

"In the mud appeared a species of *Turbo*, which, though very similar to *T. Littoreus* (the common Periwinkle), has some characters that seem to authorize its being considered as a different shell. The *anfractus* are much more swollen, as it were, than in the above species; the spire is more depressed; and, besides, there is no appearance of *striæ*, either transversely or longitudinally. This shell has a sort of distorted or rude *contour*, that may, perhaps, entitle it to the appellation of *T. Rudis*. Its colour is greenish." *Page* 377, *vol.* 1.

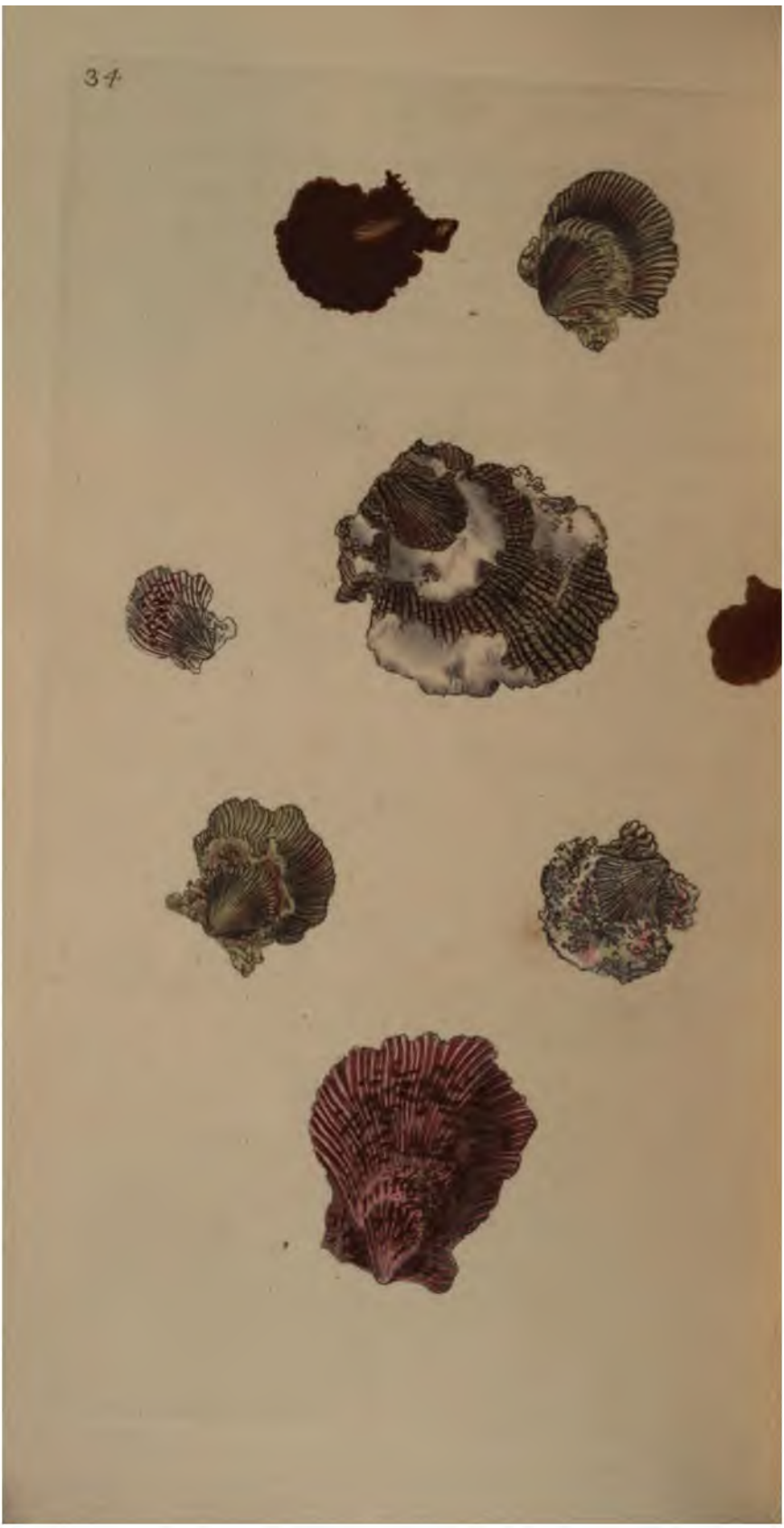

PLATE XXXIV.

OSTREA PUSIO.

DISTORTED.

GENERIC CHARACTER.

a Tethys. Shell bivalve, unequal. The hinge without a tooth, having a small oval cavity.

SPECIFIC CHARACTER

AND

SYNONYMS.

With about forty longitudinal rays. Shell irregular, or distorted.

testa aurita, striis circiter quadraginta. *Linn. F. Suec.* 1. *p.* 384. *No.* 1345.

minimus angustior, inæqualis fere et asper, sinu ad cardinem cylindraceo, ceberrimis minutissimisque striis

Pusio. *Dict. Hist. Angl. p.* 186. *tit.* 31. *tab.* 3. *fig.* 31.

Pusio. Writhed. *Petiv. Br. Zool. No.* 65. *tab.* 61. *fig.* 65.

minor alba, contusa proteiformis. *Petiv. Gazoph. tab.* 94. *fig.* 2.

d Pectines *of Stronia.* *Wallace, Orkn. p.* 43, 44

parvus inæqualibus, informis, striatus. DISTORTUS, DISTORTED. *Da Costa, Br. Conch. p.* 148. *tab.* 10. *fig.* 3. 6.

PLATE XXXIV.

Dissimilar as the several figures in this plate may appear, they are merely accidental varieties in size, growth, and colour of an individual species. These shells are generally about an inch, or more, in length, and of a somewhat globose shape: but so extremely irregular and distorted, that it can with difficulty be defined. Dr. Wallace calls these shells the curious pectines of Sroma, a little island that lies in the Pentland Firth. He found them on some parts of the Orkneys, where he observed extraordinary eddies and strong tides. The irregular form of these pectines rather surprised him. He adds, "I cannot think the sea, strange tumbling the tides make there, can contribute any thing to that frame; yet, after all, I never see them in any other place."—These shells are now found on several of the English shores, as Yorkshire, Scarborough, Mouth of the River Tees, and Dorsetshire; and are also frequent in the fossil state, in the chalk pits of Kent and Surry. Both valves are convex, and much differed, but the under one is usually the most irregular; the ribs are numerous, close set, longitudinal, and prominent. The inside of the lower valve is smooth and white, with a tint, and that of the upper has a pearly gloss. The texture is generally of a dirty white, or yellowish cast; sometimes pale brown, or russety, or white mottled, and varied with brown, or brilliant red.

The ears of this shell are large, and nearly equal, but are often so distorted as to appear much otherwise. It is proper to observe, that though the irregular form this shell assumes may be attributed to some injury it has sustained in its growth, every shell of this species is constantly found with the same distorted appearance. This circumstance leaves no reason to doubt that such distortions are characteristic of this extraordinary and peculiar species.

PLATE XXXV.

MUREX ERINACEUS.

GENERIC CHARACTER.

Spiral, rough. The aperture ending in a strait and somewhat produced gutter or canaliculation.

SPECIFIC CHARACTER.
AND
SYNONYMS.

Shell subangular, rugose, or covered entirely with raised scales or points. Spires fix.

MUREX ERINACEUS: testa multifarium subfrondoso-spinosa, spiræ anfractibus retuso coronatis, cauda abbreviata. *Linn. Syst. Nat.* 526. *p.* 1216. — *Gmel. Linn. Syst. Nat. p.* 3530.

Buccinum majus canaliculatum, rostratum, ore labioso, fimbriatum, umblicatum, ore angusto, oblongo, rugosum, costulatum, striis eminentibus reticulatim exasperatum, albidum. *Gualt.* 1. *Conch. Tab.* 49. *fig.* H.

MUREX ERINACEUS. Urchin. *Penn. Br. Zool. No.* 95. *tab.* 76. *fig.* 95. *Seba. Muſ.* 3. *t.* 49. *fig.* 78, 79.— *Martin. Conch.* 3. *t.* 110. *f.* 1026—8.

Buccinum longirostrum medium subangulatum, porcis spiralibus distinctum. Porcatum. *Da Costa. tab.* 8. *fig.* 7. 7. *p.* 133.

PLATE XXIV.

From an [illegible] of Cornwall, and Devonshire, and also on t[illegible]
[illegible]


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PLATE XXXVI.

FIG. I.

LEPAS INTERTEXTA.

GENERIC CHARACTER.

Animal Triton. Shell of many unequal valves: affixed by a stem.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell rather depressed and ribbed obliquely.

LEPAS INTERTEXTA: testa subdepressa oblique costata.
Lepas striata. *Penn. Br. Zool. t.* 38. *f.* 7.
Walker test. min. rar. f. 87.

This rare species is the *Lepas intertexta* of the Portland Museum; it was fished up at Weymouth, adhering to a valve of the Ostrea subrufus.

The shells of this genus are in general very complex in structure, the present is particularly so. Several shells of the natural size is represented on the orange space of the Ostrea, Fig. I.—Three figures are added to exhibit their magnified appearance; to distinguish these, the space is coloured green.

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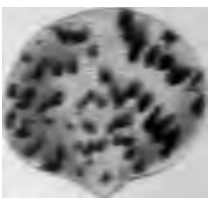

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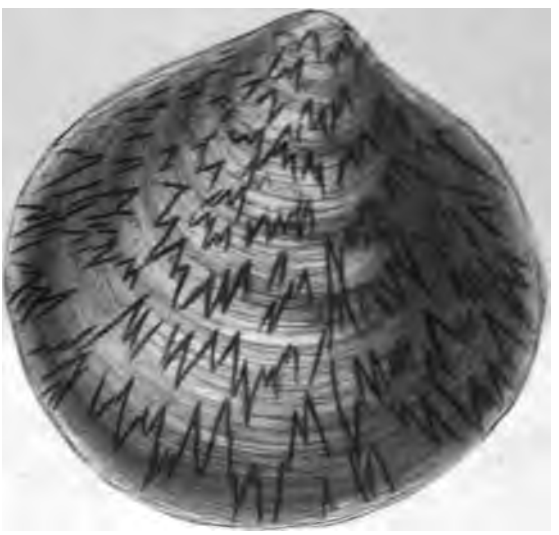

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THE

NATURAL HISTORY

OF

BRITISH SHELLS.

PLATE XXXVII.

ARCA GLYCYMERIS.

ORBICULAR ARK.

GENERIC CHARACTER.

lve, valves equal. Teeth of the hinge numerous, and inserted between each other.

SPECIFIC CHARACTER

AND

SYNONYMS.

icular, concave, very finely striated transversely and longitudinally, and variegated with zigzag marks. Margin crenated.

CA GLYCYMERIS: testa suborbiculata gibba, substriata, natibus incurvis, margine crenato. *Linn. Syst. Nat. p.* 1143. *No.* 181.

PLATE XXXVII.

Chama glycemeris, Bellon. Pectunculus ingens variegatus ex rufo. *List. H. Conch. tab.* 247. *fig.* 82.

Concha crassa, lævis, subalbida, luteis maculis radiata, signata, fasciata, et virgulata, intus macula fusca obscurata. *Gualt.* 1. *Conch. tab.* 72. *fig. G.*

Glycymeris cornubiensis crassa marmorata. *Mus. Petiv. p.* 84. *No.* 816.

Bastard, or dog's cockle. *Rutty Dublin, p.* 379.

Arca glycymeris, orbicular, *Penn. Br. Zool. No.* 58. *tab.* 58. *fig.* 58.

Glycymeris. Orbicularis crassa subalbida lineis rufulis sagittæformibus variegata, intus obfuscata margineque crenato. Orbicularis. *Da Costa. Br. Conch. p.* 168, *tab.* 11. *fig.* 22.

This species is found, of a large size, in the Mediterranean sea; those which inhabit the English coast, as Falmouth and Cornwall, rarely exceed the size of the smallest specimen we have represented. It is found likewise on the shores of Guernsey, and the coast of Ireland, where it is called the *dog's cockle.*

PLATE XXXVIII.

This shell is white, semitransparent, and rather glossy; and when alive is covered with a fine thin brown film, or epidermis, which is striated spirally. It is found on several of the English coasts, as Yorkshire, Northumberland, Essex, &c. and also on the shores of Scotland and Ireland.

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PLATE XXXIX.

FIG. I.

HELIX CORNEA.

RAM'S HORN.

GENERIC CHARACTER.

Aperture of the mouth, contracted, and lunated.

SPECIFIC CHARACTER
AND
SYNONYMS.

Wreaths, four, turned nearly horizontal: rather depressed or concave towards the centre.

HELIX CORNEA: testa supra umbilicata plana nigricante, anfractibus quatuor teretibus. *Lin. Syst. Nat. p.* 1243. *No.* 671. —*F. Suec. I. p.* 373. *No.* 1304. *II. No.* 2179.

Cochlea pulla, ex utraque parte circa umbilicum cava. *List. H. Angl. p.* 143. *tit.* 26. *tab.* 2. *fig.* 26.

Cochlea maxima, compressa, fasciata. *List. H. Conch. tab.* 136. *fig.* 40.—Cochlea pulla quatuor orbium coccum fundens, purpura lacustris. *Id. tab.* 137. *fig.* 41.

The Flat Whirl. Grew. Mus. p. 136.

Planorbis fluviàtilis major vulgaris. *Petiv. Gazoph. tab.* 92. *fig.* 5.

Helix Cornea, Horny. *Penn. Br. Zool. No.* 126. *tab.* 83. *fig.* 126.

PLATE XXXIX.

Helix fluviatilis depressa major, anfractibus quatuor, ex utraque parte circa umbilicum cava. Cornu arietis. *Tab.* 4. *fig.* 13. Da Costa *Br. Conch. p.* 60. *tab.* 4. *fig.* 13.

Purpura. S. Cochlea fluviatilis compressa major. *List. Exert. Anat.* 2. *p.* 59.

The adult shells of this species are from three quarters of an inch, to an inch and a quarter in diameter; the colours various, generally brownish or ashen colour, inclining in some to red, in others to yellow; the young shells are whitish and more transparent.

It is very common in ponds and rivers. The animal is blackish brown, and has two red capillary horns *.

The Helix Nana, or Dwarf of Pennant, fig. 125, is considered by Da Costa and other conchologists, as a young shell of this species.

* This fish emits a fine scarlet humour, if a pinch of salt of any kind, or a little pepper or ginger, be put into the mouth of the shell. It emits this fine scarlet humour all the year, especially in April and September. Dr. Lister gives a full account of it. He says, this scarlet humour may be readily got, and in great quantity, if a large parcel of these shells be wrapped up in a cloth bag, sprinkling over it a little salt; then the scarlet liquor will come plentifully. The colouring part of this humour immediately subsides, if sprinkled with powdered alum, and the rest of it remains like clear water. The colouring part may be strained through a filtering paper, but the elegance of its colour is lost, and it changes into a dull, unpleasant rusty brown. Moreover, if mixed with vinegar, spirit of wine, deliquated vegetable salts, or common salt dissolved, this elegant scarlet colour perishes in the same manner as when mixed with allum. Neither can this liquor be kept by itself pure and unmixed; for in vain did the doctor strive to preserve it in narrow mouthed bottles or phials, perfectly well closed, and with oil or honey thrown over it. Thus this colour is of so fugitive a nature, that no acid or astringent has been found sufficient, to preserve the elegance of its tint."

" Dr. Lister further recites some observations and experiments he made on this scarlet fluid, to discover whether it was a humour of the body, or to be got by literation or incision, as blood; a saliva from the throat or stomach; or a particular humour contained in certain vessels or parts; but the nicety and difficulty of the experiments rendered it impossible for him to determine it precisely." Da Costa, page 61, 62.

PLATE XXXIX.

FIG. II.

HELIX LAPICIDA,

ACUTE EDGED.

SPECIFIC CHARACTER
AND
SYNONYMS.

Above and beneath rather convex; back of the wreaths carinated, Deeply umbilicated.

HELIX LAPICIDA: testa carinata umbilicata utrinque convexa, apertura marginata transversali ovata. *Linn. Syst. Nat. p.* 1241. *No.* 656.

Cochlea testa utrinque convexa, subtus perforata, spira acuta apertura ovata transversali. *Linn. Faun. Suec.* 1. *p.* 371. *No.* 1298. 11. *No.* 2174.

Cochlea pulla, sylvatica, spiris in aciem depressis. *List. H. An. Angl. p.* 126. *tit.* 14. *tab.* 2. *fig.* 14.

Cochlea nostras, umbilicata, pulla. *Hist. H. Conch. tab.* 69. *fig.* 68.

Planorbis terrestris Anglicus, umbilico minore, margine acuto. *Mus. Petiv. p.* 69. *No.* 734.

Cochlea terrestris media acie acuta: land cheese shell with a sharp edge. *Petiv. Gaz. tab.* 92. *fig.* 11.

Helix Lapicida. ROCK. *Penn. Br. Zool. No.* 121. *tab.* 83. *fig.* 121.

Cochlea umbilicata, margine in acie acuto depresso, ACUTA. sharp. *Da Costa Br. Conch. p.* 55. *tab.* 4. *fig.* 9. 9.

PLATE XXXIX.

This species is found in several countries of Europe. In Great Britain it seems to be a local and rather uncommon kind. Da Costa says "though found in many parts of England, is not met with in any plenty, but is scarce. I have found them on the rocks, at and near Matlock, in Derbyshire, about Bath, in Somersetshire, also on rocks; in Surrey, Wiltshire, and Hampshire, in the moss on the bodies of large trees, and in woods. Dr. Lister found them on the grass in Lincolnshire; Mr. Petiver, in hedges, between Charlton and Woolwich, in Kent*; Mr. Morton, in hedge-bottoms, in Oakly Parva, in Northamptonshire; and Mr. Wallis, on the rocks in Northumberland: but they are not common or frequent any where." page 56.

* Not uncommon last summer in the woods of Kent.

PLATE XL.

MYTILUS UMBILICATUS.

UMBILICATED, OR WRY BEAK MUSCLE.

GENERIC CHARACTER.

The hinge toothless, and consists of a longitudinal furrow.

SPECIFIC CHARACTER
AND
SYNONYMS.

Hinge much depressed and bent inwards.

MYTILUS UMBILICATUS, umbilicated. *Penn. Br. Zool. sp.* 76. *fig.* 76.

MYTILUS CUROIROSTRATUS. WRY BEAK. *Da Costa Br. Conch. p.* 220. 50.

We are informed by Pennant that this shell was discovered by the Reverend Hugh Davies; that it is a rare and new species, and is sometimes dredged up off Priestholme Island, Anglesea.

It is about half the size of Mytilus Modiolus, and in some respects resembles it; but is distinguished by the very remarkable and peculiar

PLATE XII.

FIG. II.

TELLINA VARIABILIS.

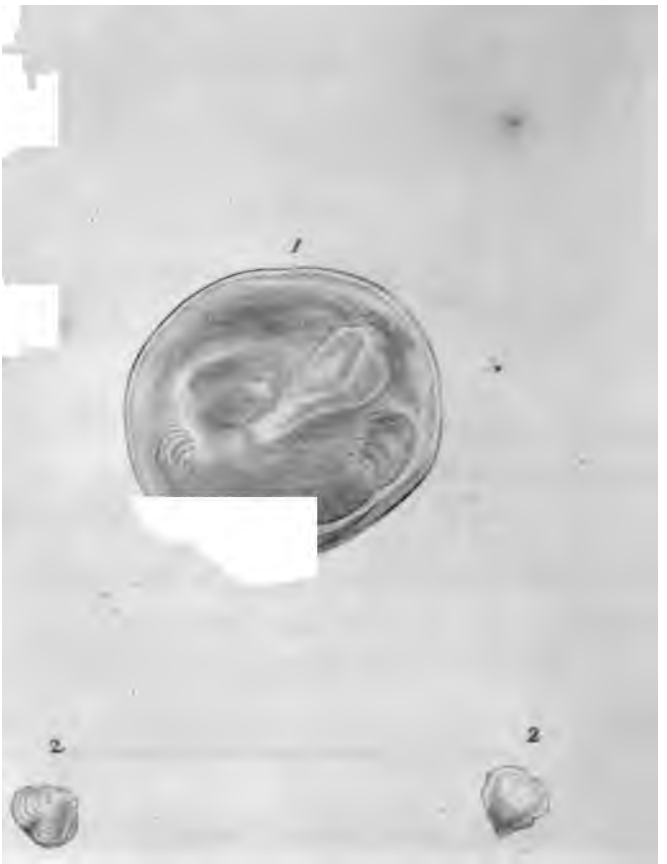
SPECIFIC CHARACTER.

Shell somewhat oval or oblong, radiated with pale red streaks; a single tooth in the hinge of one valve, which is inserted between two teeth on the other valve, when shut.

SOLEN VESPERTINUS: testa ovali oblonga spadiceo-radiata, cardinis sinistræ valvæ dente solitario duplici alterius inserto. *Gmel. Lin. Syst. Conch. p.* 3228. *sp.* 20.

This is the *Tellina variabilis* of the late Dr. *Solander*, and the *Portland Museum*; Gmelin arranges it amongst the Solens.

Found on the coast of Cornwall and Weymouth, and not noticed by either *Pennant* or *Da Costa* as an English shell.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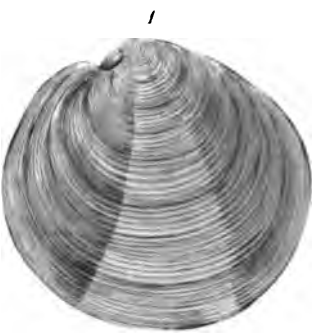
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PLATE XLII.

Venus exoleta, antiquated. *Penn. Br. Zool. No.* 49. *tab.* 54. 55.—49 & 49 *A.*

Pectunculus planus, crassus, striis capillaceis dense striatus. CAPILLACEUS, HAIR-STREAKED. *Da Costa. Brit. Conch. p.* 187. *sp.* 24.—*Tab.* 12. *fig.* 5. 5.

Found in plenty on several of the British shores, as Cornwall, Dorsetshire, Devonshire, and Yorkshire; also in the isle of Guernsey, and those of the Orkneys.

FIG. II.

VENUS SINUOSA.

A. INDENTED VENUS SHELL.

SPECIFIC CHARACTER.

Thin, convex, a deep obtuse *sinus*, or bending on the front. *Penn. Br. Zool. p.* 95. *sp.* 51.

Figured and described by Pennant, from a specimen in the Portland cabinet, that was found at Weymouth. The shell we have figured is in the collection of the Rev. T. Rackett.


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PLATE XLIII.

CYPRÆA PEDICULUS.

SEA LOUSE COWRY, or NUN.

GENERIC CHARACTER.

l, blunt at the ends. Aperture, length of the shell, longitudinal, linear, toothed.

SPECIFIC CHARACTER

AND

SYNONYMS.

rex, margined, and furrowed transversely across the back.

A PEDICULUS testa marginata transversim sulcata. *Linn Syst. Nat. p.* 1180. *No.* 364.

veneris exigua, alba, striata, Nuns. *List. H. Conch. tab.* 707. *fig.* 57.

veneris exigua purpascens, striis minimis transversis, tribus maculis fuscis dorso inspersa. The purple spotted nuns, *alias cowrie*, &c.—Concha veneris minima nullis maculis insignita. The smallest nuns without spots. *Borlase Cornw. p.* 277. *tab.* 28. *fig.* 12. 13.

Mer—*Argenv. Conch.* 1. *p.* 310. *tab.* 21. *fig. L. II. p.* 270. *tab.* 18. *fig. L.*

na vulgaris, parva, globosa, striata, candida, dorso sinuato. *Gualt.* 1. *Conch. tab.* 14. *fig. P.* & *tab.* 15. *fig. R.*

PLATE XLIII.

Cypræa pediculus, common. *Penn. Brit. Zool. No.* 82. *tab.* 70. *fig.* 82.

Cypræa exigua transversim striata, maculæ fuscæ dorso inspersa. Pediculus, seu monacha. *Da Costa Br. Conch. p.* 33. *sp.* 18. *tab.* 2. *fig.* 6. 6.

This shell is very common on our shores, and a variety of the same species is also abundant in the West Indies. The English shells of this kind are of various tints, generally whitish, and with or without spots; the exotic kind is distinguished by a furrow on the back.

PLATE XLIV.

VENUS VERRUCOSA.

WARTED VENUS SHELL.

GENERIC CHARACTER.

·e. Hinge furnished with three teeth; two near each other, the third divergent from the beaks.

SPECIFIC CHARACTER

AND

SYNONYMS.

newhat heart shaped. Deeply decussated on the sides, with ·erse and oblique furrows, which form membraneous protube-s or warts. Margins finely crenated.

ɔs VERRUCOSA: testa subcordata: sulcis membranaceis striatis reflexis, antice imprimis, verrucosis, margine crenulato. *Linn. Syst. Nat. p.* 1130. *No.* 116.

ınculus omnium crassissimus, fasciis ex latere bullatis donatus. *List. H. Conch. tab.* 284. *fig.* 122.

ha marina valvis æqualibus æqualitera, notabiliter umbonata et oblique incurvata, subrotunda, vulgaris, striis circularibus profundis, elatis, bullatis exasperata, et circumdata, crassa, subalbida. *Gualt.* 1. *Conch. tab.* 75. *fig. H.*

:ha cinerea densa, margine dentato, striis rugosis et é lateribus undose tuberculosis. The wrinkled, notched, and high-beaked concha, or cockle. *Borlase Cornw. p.* 278. *tab.* 28. *fig.* 32.

PLATE XLIII.

[illegible] *Pennant Brit. Zool.* No. 82. *tab.* 70. *fig.* [illegible]

[illegible] macula fusca dorso inspersa. [illegible] *Da Costa Br. Conch.* [illegible]

This shell is very common on our shores, and a variety of the same species is also abundant in the West Indies. The English shells of this kind are of various sizes, generally whitish, and with or without spots. The smaller kind is distinguished by a narrow on the back.

PLATE XLIV.

Clonisse de la Mediterranéé *d'Avila. Cab. p.* 333. *No.* 762.

Venus Erycina, Sicilian. *Penn. Brit. Zool. No.* 48. *tab.* 54. *fig.* 48.

Cornwall heart cockle, with rugged girdles. *Petiv. Gazoph. tab.* 93. *fig.* 17.

Pectunculus crassissimus strigatus, strigis ex latere bullatis, strigatus, ridged. *Da Costa Br. Conch. p.* 185. *sp.* 3. *Tab.* 12. *fig.* 1. 1.

Da Costa says, "this species is rare in our seas. The shores of Cornwall afford them, and they have been got in Devonshire and Dortsetshire." They have also been found on the eastern coast of Sussex, but not frequently.

PLATE XLV.

"This Oyster," says Da Costa, "hitherto only proposed and described by Dr. *Lister*, is a very different species from the common *Oyster*, but has been always overlooked as the same kind." Dr. Lister observes that it is found in plenty at the mouth of the river *Tees*, in Yorkshire, and says he first eat of it at *Bourdeaux*, in France, where it is greatly esteemed and called Rock Oyster, being found among the rocks.

The figure of this shell in the plate of Da Costa above quoted, is so very indifferent and devoid of true character, that were we not in possession of the specimen he represents, it would be difficult to ascertain it. In the general description he says the outside is a little uneven, *but not rugged* nor of *a leaved or flakey structure* as the common Oyster: he adds that the ridges are longitudinal, about the thickness of a thread, very numerous, irregular, and run one into another; but towards the bottom always furcate or divide. This description is accurate but does not accord with the figure, in which the longitudinal ridges appear of a flakey structure or like laminæ, and not numerous, irregular threadlike striæ as in the shell. We have selected several characteristic specimens of this species in the annexed plate.

This shell is thick, strong, and nearly opake: it is usually about an inch in diameter; the valves unequal, the under one being very concave, the upper one flattish. Within, it is of a livid green and rather glossy, the hinge broad, deep, somewhat triangular and striated transversely. In many shells there is a remarkable white mark exactly resembling a thick spot of white oil paint, placed a little below the hinge, this spot always appears in radiated wrinkles from the centre, and is formed by the muscle of the shell.

PLATE XLV.

It is found on many of our shores, as Kent, Sussex, Dorsetshire, &c. in abundance, and of various colours; some are very fine like japan lacquer, and others of a violet, green, pink, yellow or pearly tint when much worn. It is remarkable, however, that the upper valves are so scarce, that hundreds of the lower valves are found to one of them.

PLATE XLVI.

Solen major, subfuscus, rectus. *H. Conch. tab.* 409. *fig.* 255.

Solen unguis; the ſheath, razor, or spoutfish. *Grew Mus. p.* 143.
—*Merret Pin. p.* 193.

Solen ſive concha tenuis longissimaque ab utraque parte naturaliter hians; the spout fish. *Wallace Orkneys, p.* 45.

Solen noſtras vulgaris. *Muſ. Petiv. p.* 87. *No.* 844.

Solen major subfuscus rectus. SILIQUA. *Da Costa. tab.* 17. *fig.* 5, *p.* 235. *sp.* 59.

This shell is found in a [illegible] on many of the English shores, especially the northern [illegible] tern coasts, and those of Scotland and Ireland.

The antients esteemed this fish a delicious food, and Dr. Lister informs us he thought it nearly as rich and palatable as the Lobster. In England and Scotland it is at present mostly used for baits, and not for the table; but in Ireland is much eaten in Lent.—It is in season in spring.

From the hinge to the opposite margin the length is about half an inch, and its breadth from five to seven inches; but some shells are found much larger. The outside is covered with a thin transparent yellow-brown cuticle or epidermis, like glue, which peels off soon after the fish is dead or exposed to the shores. Under this epidermis the shell is smooth, very glossy, and marked with many concentric transverse wrinkles from the middle to one extreme, the other half is striated lengthways. Inside white and glossy.

PLATE XLVI.

DA COSTA OBS.—Mr. Wallis, in his History of Northumberland, p. 396. No. 9. notes a sort of this shell he calls the *Orange and White Solen*, found in *Budle Sands* with this *common sort*, and in *all respects like it, except in colour*, which is deep orange and white in transverse fillets, in alternate variegations. *Quere, if a distinct species, or only a variety?*

PLATE XLVII.

TELLINA CARNARIA. *Linn.*

FLESH-COLOURED TELLEN.

GENERIC CHARACTER.

The hinge usually furnished with three teeth; shell generally sloping on one side.

SPECIFIC CHARACTER.

Somewhat orbicular; valves shallow. White tinged with rose colour, and marked externally with numerous parallel striæ, disposed in an oblique, reflexed and transverse direction.

TELLINA CARNARIA: testa suborbiculata lævi utrinque incarnata oblique striata: striis hinc reflexis. *Linn. Syst. Nat. p.* 1119. *No.* 66.

Concha parva subrotunda, ex parte interna rubens. *List. H. An. Angl. p.* 175. *tit.* 25. *tab.* 4. *fig.* 5.

Tellina æquilatera lævis, tenuis subrubra. *Gualt.* 1. *Conch. tab.* 77. *fig.* 1.

Cardium parvum subrotundum oblique striatum colore carneoso. Carneosum. *Da Costa. p.* 181. *sp.* 20.

PLATE XLVII.

According to Dr. Lister this species is a shore shell, and found very frequently in the shallows of Lancashire, and near Filey in Yorkshire, &c. It is also found at Scarborough, Dorsetshire, Devonshire, and Cornwall.

It is an elegant shell, the outside being beautifully marked with numerous delicate striæ like strokes of engraving, and tinged with a fine rose or flesh colour. Some specimens are almost white, or white with transverse bands of deeper red, and the margins yellow. Within, the red colour is much more vivid than the outside.

Da Costa has placed this species in the *Cardium* genus, and indeed with much propriety; though Linnæus arranges it amongst the *Tellens*. It has a tendency on one side to flexure or slope like the Tellens, but the central and remote lateral teeth we think should remove it to the former genus.

PLATE XLVIII.

ANTALES *Argenville Conch.* 1. *p.* 246. *tab.* 7. *fig. K. II. p.* 196, *tab.* 3. *fig. K.*

Dentale læve albescens. Vulgare. *Da Costa. Br Conch. p.* 24. *tab.* 2. *fig.* 10.

This singular shell is found on many of the British shores, but rarely occurs perfect. It is abundant on our southern shores, as Hampshire, Devonshire, &c.


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PLATE XLIX.

OSTREA MAXIMA.

GREAT SCALLOP.

GENERIC CHARACTER.

Animal a Tethys. Shell bivalve, unequal. Hinge without a tooth, having a ſmall oval cavity.

SPECIFIC CHARACTER AND SYNONYMS.

Upper valve flat, lower concave. About fourteen rounded longitudinal ribs, which are also deeply striated.

OSTREA MAXIMA: testa inæquivalvi radiis rotundatis longitudinaliter striatis. *Linn. Syst. Nat. p.* 1144 *No.* 185.

Concha testa aurita, striis quatuordecim. *Linn. F. Suec. I. p.* 383. *No.* 1343. *II.* 2148.

P. maximus, circiter quatuordecim striis, admodum craſſis & eminentibus et iisdem ipsis striatis inſignitus. A Scallop. *List. H. An. Angl. p.* 184. *tit.* 29. *tab.* 5. *fig.* 29.

Escallop, or Scallop. *Merret. Pin.* 193.

Scallop or Clam-shell. *Wallace Orkn. p.* 43. &c.

PLATE XLIX.

Frill or Scallop. *Hutchins Dorset. p.* 77.

Pecten Maximus. Great. *Penn. Br. Zool. No.* 61. *tab.* 59. *fig.* 61.

Pecten. Maximus inæquivalvis, costis circiter quatuordecim rotundatis, & admodum crassis. Vulgaris, the common scallop. *Da Costa Br. Conch. p.* 140. *tab.* 9. *fig.* 3. 3.

The large Escallop is found on most of the coasts of Great Britain and Ireland, particularly on those of Portland and Purbeck in Dorsetshire.—The fish is eaten and much esteemed.

It is said by modern, as well as antient authors, that Escallops will move so strongly as to leap out of the catcher wherein they are taken: their way of leaping or raising themselves up, is by forcing the under valve against whatever they lie upon.


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PLATE LI.

Buccinum subflavum pellucidum, quatuor orbium, ore amplissimo, mucrone acuto. *List. H. Conch. tab.* 123. *fig.* 22.

Buccinum fluviatile pellucidum, subflavum, quatuor spirarum, mucrone acuto, testæ apertura patentissima. *List. Exerc. Anat.* 2. *p.* 54.

Turbo with four wreaths, a remarkable large mouth, and a short acute apex. *Wallis Northumb. p.* 370.

Helix auricularia. *Penn. Br. Zool. No.* 138. *tab.* 86. *fig.* 138.

Turbo subflavus pellucidus quatuor spirarum ore patulo. Patulus. *Da Costa sp.* 53. *p.* 95. *tab.* 6. *fig.* 17.

Found in plenty in rivers, ponds, &c.

FIG. II.

HELIX STAGNALIS,

LAKE SNAIL, OF FRESH WATER TURBO.

SPECIFIC CHARACTER
AND
SYNONYMS.

Without umbilicus. Oblong; spire tapering. Several prominent longitudinal wrinkles which somewhat angulates the shell. Aperture oblong oval.

PLATE LI.

HELIX STAGNALIS: testa imperforata ovata-subulata, subangulata, apertura ovata. *Linn. Syst. Nat. p.* 1249. *No.* 703.

Cochlea testa producta acuminata, opaca, anfractibus senis subangulatis, apertura ovata. *Linn. F. Suec. I. p.* 374. *No.* 1310. *II. No.* 2188.

Buccinum longum sex spirarum, omnium & maximum & productius, subflavum, pellucidum, in tenue acumen ex amplissimâ basi mucronatum. Turbo lævis in stagnis degens. *Aldror. de Testaceis, I.* 3. *p.* 359. *No.* 3.

Buccinum subflavam pellucidum, sex orbium, clavicula admodum tenui, productiore. *List. H. Conch. tab.* 123. *fig.* 21.

Buccinum minus fuscum, sex spirarum, ore angustiore. *List. H. An. Angl. p.* 139. *tit.* 22. *tab.* 2. *fig.* 22.

Helix Stagnalis. *Lake. Penn. Br. Zool. No.* 136. *tab.* 86. *fig.* 136.

Fresh water turbo with six wreaths. *Wallis Northumb. p.* 369.

Turbo longus et gracilis in tenue acumen mucronatus, imperforatus & pellucidus Stagnalis. *Da Costa Br. Conch. p.* 93. *sp.* 52. *tab.* 5. *fig.* 11.

The largest and most produced of the British river snails, and is found in plenty in all our rivers, lakes, ponds, and other waters.

Lister and Petiver have made two species of this shell maximum and minus; they appear however to be merely different stages of its growth.

PLATE LII.

TROCHUS ZIZYPHINUS.

LIVID TOP SHELL.

GENERIC CHARACTER.

Animal a slug. Shell conic. Aperture nearly triangular.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell conic, livid, without umbilicus: spirally striated, with the upper edge of each wreath margined.

TROCHUS ZIZYPHINUS: testa imperforata conico livida lævi, anfractibus marginatis. *Linn. Syst. Nat. p.* 1231. *No.* 599.—*Faun. Suec. II. No.* 2168.

Trochus albidus maculis rubentibus distinctus, sex minimum spirarum. *List. H. An. Angl. p.* 166. *tit.* 14. *tab.* 3. *fig.* 14.

Trochus pyramidalis variegatus, limbo angusto in summo quoque orbe circumdatus. *List. H. Conch. tab.* 616. *fig.* 1.

Culs de Campe de moyenne grandeur, lisses, marbrès de rouse et de violet, à orbes separès par un cordon. *D'Avila, cab. p.* 127. *No.* 155.

PLATE LII.

Trochus Ziziphinus, livid. *Penn. Br. Zool. No.* 103. *tab.* 80. *fig.* 103.

Trochus pyramidalis imperforatus, lividus, rubro variegatus, limbo in summo quoque orbe circumdatus. Zizyphinus. *Da Costa Br. Conch. tab.* 3. *fig.* 2. 2. *p.* 37.

This is one of the moſt elegant of the testaceous tribe found on our coasts; the colour in general is fleſh colour or pale red, elegantly variegated with deeper red or brown in streaks, waves, and chequers; when the exterior coat is worn, the shell is of a fine pearly hue.

It is not an uncommon species on the English shores, and is also found in the Orkneys and the western isles of Scotland.

PLATE LIII.

SOLEN LEGUMEN.

PEASECOD.

GENERIC CHARACTER.

Bivalve, with equal valves, oblong, open at both ends. At the hinge a subulated tooth turned back, often double; not inserted in the opposite shell. Animal an ascidia.

SPECIFIC CHARACTER AND SYNONYMS.

Strait, oblong, rounded at both ends: smooth, and somewhat pellucid.

SOLEN LEGUMEN: curtus subpellucidus, ad chamas quodammodo accedens. Peasecod. *Da Costa. Br. Conch. p.* 238. *sp.* 61.

Solen Legumen, Suboval. *Penn. Br. Zool. No.* 24. *tab.* 46. *fig.* 24.

Concha soleniformis, lævis aut levissime striata, fragilis, pellucida, testa tenuissima cornea, subalbida, aliquando flavescens. *Gualt.* 1. *Conch. tab.* 91. *fig. A.*

Chama subfusca, angustissima, ad solenes quodammodo accedens. *List. II. Conch. tab.* 420. *fig.* 264.

PLATE LIII.

Both Pennant and Da Costa note this as a very rare British species. The first says it is found at Red Wharf, Anglesea, in North Wales; the latter received it from Christchurch, in Hampshire.

We have found it on the shores of Glamorganshire, and also in abundance in the sandy bay of Caermarthen this summer.

PLATE LIV.

CARDIUM LÆVIGATUM.

LARGE HIGH-BEAKED COCKLE.

GENERIC CHARACTER.

Two teeth near the beak, and another remote one on each side of the shell.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell somewhat oval, slightly striated longitudinally.

CARDIUM LÆVIGATUM: testa obovata: striis obsoletis longitudinalibus. *Gmel. Linn. Syst. Nat. p.* 3251. *sp.* 18.

Pectunculus maximus, at minus concavus; plurimis minutioribus & parum eminentibus striis donatus, rostro acuto, minusque incurvato. *List. H. An. Angl. p.* 187. *tit.* 32. *tab.* 5. *fig.* 32.

Pectunculus subfuscis striis leviter tantum incisis. *List H. Conch. tab.* 332. *fig.* 169.

Pectunculus major striis angustis. *Petiv. Gaz. tab.* 93. *fig.* 10.

Large high-beaked Cockle. *Wallis Northumb. p.* 395.

Cardium Lævigatum. Smooth. *Penn. Br. Zool. No.* 40. *tab.* 51. *fig.* 40.

Cardium obovatum striis obsoletis longitudinalibus. LÆVIGATUM. *Da Costa. Br. Conch. p.* 178. *sp.* 18.

PLATE LIV.

We have observed, that this species is in general discoloured, and deeply tinged with brown or yellow; when fine it is whitish, sleek, and covered with an epidermis.

It is found on most of our coasts, yet it is by no means common. Da Costa notes it from Yorkshire, Northumberland, Dorsetshire, Cornwall, Carnarvonshire, and the Orkneys.

PLATE LVI.

LEPAS DIADEMA.

WHALE ACORN SHELL.

GENERIC CHARACTER.

Animal Triton. Shell of many unequal valves; affixed by a stem.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell subrotund, of six lobes, furrowed longitudinally.

LEPAS DIADEMA: testa subrotunda, sexlobata sulcata. *Gmel. Linn. Syst. Nat. p.* 3208. *sp.* 4.

Balanus balænæ cuidam Oceani Septentrionalis adhærens. *List. H. Conch. tab.* 445. *fig.* 288.

Pediculus ceti. *Phil. Trans. No.* 222. *p.* 323. *Epitome Trans. Soc. R. Angl. Vol.* 5. *p.* 381. *tab.* 17. *fig.* 2.

Pediculus ceti, vel Lepas nuda carnosa aurita. *Idem.* 1758. *Vol.* 50. *P.* 2. *tab.* 34. *fig.* 1, *and fig.* 7.

Martin. *West. Isles, p.* 162 *and* 166.

Quarta species echini plani. *Rumph. Mus. tab.* 14. *fig. H.*

Balanus balænaris. *Klein. Ostrac.* 176. *tab.* 12. *fig.* 98.

Pediculus ceti. *Boccon. recher. p.* 287.

Grand pou de Baleine. *D'Avil. Cab. p.* 404.

Balanus hemisphericus sexlobatus. Balænæ. *Da Costa Br. Conch. tab.* 17. *fig.* 2. 2. 2.

PLATE LIV.

We have observed, that this species is in general discoloured, and deeply tinged with brown or yellow; when fine it is whitish, sleek, and covered with an epidermis.

It is found on most of our coasts, yet it is by no means common. Dr. Coste notes it from Yorkshire, Northumberland, Dorsetshire, Cornwall, Carnarvonshire, and the Orkneys.

PLATE IV.

Mytilus flavialis maximus, profunde striatus latus; testa admodum tenui, ex fusco viridescens, interdum rufescens, intus argentea. *Gualt.* 1. *Conch. tab.* 7. *fig. F.*

Mytilus Cygneus. Sowerb. *Pennant. Brit. Zool.* No. 78. *tab.* 67. *fig.* 78.

Mytilus flavialis maximus, admodum tenuis ex fusco viridescens. Cygneus. *Da Costa Br. Conch. p.* 214. *sp.* 46.

This species is not uncommon in our Rivers, Ponds, &c. but is less frequent than the Mytilus Anatinus, or Small Horse Muscle, which bears some resemblance to it. Mytilus Anatinus is rarely more than half the size of Mytilus Cygneus, is more compressed, and has the cardiac side extended in a straight line to an acute angle at one end.

The usual length of Mytilus Cygneus is about two or three inches, its breadth five or six inches. The valves deep, or concave. The outside is wrinkled transversely, and varies in colour according to the state of the Shell. The external covering, or epidermis, is thin, but strong, and of a greenish colour; under this the Shell is varied with bright brown, and when the coating is worn off, the whole Shell is pearly. The inside is often rugged with small pearls.

PLATE LVI.

This large and interesting species of Balani is found adhering to the Whale, whence it is called the Whale Acorn Shell. It is not uncommon in the sea round Scotland. The natives of some of the Western Islands distinguish one species of Whale from the rest, for its great size, and the *big limpets* growing on their backs *. The same species is common on the Whales in the Northern Seas about Newfoundland.

The Animal is figured by Ellis, in the Philosophical Transactions for 1758, and resembles a cluster of small hooded and eared serpents issuing from the central cavity, and little openings at the tops of the longitudinal ribs. The base by which it is affixed, when alive, is covered with a coriaceous skin.

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* Martin. Fladda Chuan, near the Isle of Skie.


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PLATE LVII.

VOLUTA TORNATILIS.

OVAL VOLUTE.

GENERIC CHARACTER.

Animal Limax. Shell spiral, aperture narrow, without a beak: Columella plicated.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell oval, pointed at each end, and striated spirally. Pillar lip turned in a fold.

VOLUTA TORNATILIS: testa coarctata ovata substriata: spira elevata acutiuscula, columella uniplicata. *Gmel. Linn. Syst. p.* 3437.

Buccinum parvum, rostro integro, tenuiter striatum, fasciatum, clavicula paulo productiore, unico dente ad columellam. *List. H. Conch. tab.* 835. *fig.* 58.

Auris Midæ fasciata. *Klein Ostrac. p.* 37. §. 96. *sp. I. No. I.*

Voluta tornatilis. Oval. *Penn. Br. Zool. No.* 86. *tab.* 71. *fig.* 86. Schroet. *n.* Litterat. 3. *t.* 2. *f.* 12. 13.

Ovalis. Turbo ovalis striatus rubicundus fasciis albis, columella uniplicata & unidentata. *Da Costa Br. Conch. p.* 101. *tab.* 8. *fig.* 2. 2. *sp.* 57.

PLATE LVII.

"This pretty species," says Da Costa, "I have received from Tinmouth and Exmouth, in Devonshire;" and Pennant notes it from Anglesea only.

PLATE LVIII.

MACTRA LUTRARIA.

GENERIC CHARACTER.

Animal a Tethys. Bivalve, sides unequal. Middle tooth complicated, with a little groove on each side; lateral teeth remote.

SPECIFIC CHARACTER AND SYNONYMS.

Shell oblong oval, smooth; no lateral teeth. Hinge, a small and large triangular cavity in one valve; a similar cavity and an elevated triangular tooth in the opposite.

MACTRA LUTRARIA: testa ovali oblonga lævi, dentibus lateralibus nullis. *Gmel. Linn. Syst. p.* 3259. *sp.* 14.

Concha longa lataque in mediis cardinibus cavitate quadam pyriformi insignita.—An Chamæ glycymeris Rondeletii? *List. H. Angl. p.* 170. *tit.* 19. *tab.* 4. *fig.* 19.—Chama fusca lata planior. *Hist. Conch. tab.* 415. *fig.* 259.

The long and broad conch. *Wallis Northumb. p.* 396. *No.* 10. 11.

Mactra lutraria, large. *Penn. Br. Zool. No.* 44. *tab.* 52. *fig.* 44. *Chemnitz. Conch.* 6. *t.* 24. *f.* 240. 241.

Chama magna planior, crassa, albescens, Magna. *Da Costa Br. Conch. p.* 230. *sp.* 55. *tab.* 17. *fig.* 4.

[illegible]

[illegible]

[illegible] orange, and [illegible] with a delicate [illegible]

PLATE LIX.

Argenv. Conch. *I. p.* 384. *tab.* 32. *fig.* 12. *II. p.* 339. *tab.* 28. *fig.* 12.

Turbo terrestris tenuissime, ipso ore circinato, cui etiam limbus latus, et striatus, albidus, *Gualt I. Conch. tab.* 4. *fig. B.*

Turbo tumidis. Tumid. *Penn. Br. Zool. No.* 110. *tab.* 82. *fig.* 110.

This species is particularly noticed by most conchologists. Dr. Lister says it is the most elegant of all our snails, and is found near Oglethorpe and Burwell woods in Lincolnshire, in Yorkshire, and in Kent. Petiver found it about Charlton, in Kent; also Morton, in Northamptonshire; Pennant, in the woods of Cambridgeshire; and Da Costa, in Surrey. It is no where common.


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PLATE LX.

This elegant species is rather uncommon upon our coasts. Da Costa says he received it from Scarborough, in Yorkshire; and adds, it is scarce on the coasts of Cornwall, but of a larger size; the finest coloured specimens we have seen are from Dorsetshire and Wales.

The Tellina incarnata is smaller than trifaciata but very similar, and may be easily confounded with it.

PLATE LXI.

MACTRA SOLIDA.

GIRDLED.

GENERIC CHARACTER.

Animal a Tethys, Bivalve, sides unequal. Middle tooth complicated, with a little groove on each side; lateral teeth remote.

SPECIFIC CHARACTER

AND

SYNONYMS.

Thick, transversely striated and girdled.

MACTRA SOLIDA: testa opaca læviuscula subantiqua. *Gmel. Linn. Syst. Nat. p.* 3259. *sp.* 13.

Concha crassa, ex altera parte compressa, ex altera subrotunda. *List. H. An. Angl. p.* 174. *tit.* 24. *tab.* 4. *fig.* 24.—Pectunculus crassiusculus albidus. *List. H. Conch. tab.* 253. *fig.* 87.

Chama media fasciata crassa *Petiv. Gaz. tab.* 94. *fig.* 7.

Chama minor plurimis fasciis. *Id. ib. fig.* 6.

A Pectunculus with azurine circular lines interpolated. *Leigh. Lancashire. tab.* 3. *fig.* 6.

Thick white striated Chama. *Wallis Northum. p.* 395.

PLATE LXI.

Mactra solida; strong. *Penn. Br. Zool. No.* 43. *tab.* 51. *fig.* 43 *A. et tab.* 52. *fig.* 43.—*Chemnitz. Conch.* 6. *t.* 23. *f.* 229. 230.

Trigonella crassa transversim fasciata. ZONARIA. *Da Costa. Br. Conch. tab.* 15. *fig.* 1. 1.

This species is found on many of our shores, as Kent, Dorsetshire, Lancashire, Yorkshire, Northumberland, the coast of Wales, &c.

The girdles are most prominent in the dead shells; the surface between them appearing much worn.

PLATE LXII

Concha ex dimidia pene margine profunde striata. *Merret Pin. p.* 194.

Chamæ pholas bifrons. Furrow-ribbed Pholas Muscle. *Petiver Gaz. tab.* 79. *fig.* 13.

Pholas Crispatus. Curled. *Penn. Br. Zool. No.* 12. *tab.* 40. *fig.* 12.

Pitaut, ou Dail Pholade. *Argenv. Conch.* 1. *p.* 365. *pl.* 30. *p.* 322. 26. *H.*

Pholas ovalis, parte dimidia striis undatim crispatis, altera lævis; dens longus angustus curvus. Bifrons. *Da Costa Br. Conch. p.* 242. *tab.* 16. *fig.* 4. 4.

Found in great abundance on many of our shores, nitched or burrowed in the rocks and stones in Cornwall, Lincolnshire, Yorkshire, Wales, &c.

PLATE LXIII.

ARCA NUCLEUS.

SILVERY ARK.

GENERIC CHARACTER.

Animal Tethys? Shell bivalve, equivalve. Teeth of the hinge numerous, inserted between each other.

SPECIFIC CHARACTER AND SYNONYMS.

Small, somewhat triangular, smooth, silvery within. Hinge semicircular, beset with numerous plate-like teeth. Margin finely crenated

ARCA NUCLEUS: testa oblique ovata læviuscula, natibus incurvis, margine crenulato, cardine arcuato. *Linn. Syst. Nat. p.* 1143. *No.* 184.

ARCA NUCLEUS: testa oblique ovata læviuscula: cardine triangulari. *Gmel. Linn. Syst. Nat. p.* 3314. *sp.* 38.

Tellina inæquilatera, margine interno minutissime dentato, sed prope cardinem denticulis spissis, elatoribus, acutis, conspicua, oleagina, intus argentea. *Gualt* 1. *Conch. tab.* 81. *fig. R.*

PLATE LXIII.

Pectunculus minimus lævis, intus argenteus, cardine serrato. Silver Cockle. *Mus. Petiv. p.* 87. *No.* 841. *et Gazop. tab.* 17. *fig.*

Glycemeris Argentea parva subtriangularis, lævis, intus argentea. *Da Costa. Br. Conch. p.* 170. *sp.* 13. *tab.* 15. *fig.* 6. *right hand.*

This kind is found in great abundance on many of our shores, as Kent, Essex, Sussex, Devonshire, &c. and is also met with at Scarborough.

When these shells are fresh and perfect, says Da Costa, the outside is of an olive green, with some few transverse wrinkles; but when rubbed or worn are quite white, and almost smooth. The inside is of a fine silvery colour.

PLATE LXIV.

FIG. II.

TELLINA RIVALIS.

RIVER TELLEN.

SPECIFIC CHARACTER.

Shell oblique, somewhat ovated, furrowed transversely, and of an horn colour.

TELLINA RIVALIS: testa oblique subovata transversim sulcata cornei coloris. *Maton. Linn. Trans. vol.* 3.

The English naturalist is indebted to Dr. William Maton, author of the Tour of the Western Counties, for the discovery of this new and interesting British species. The first account of it appeared in a paper presented by him to the Linnæan Society, and afterwards inserted in their Transactions; and it is to this gentleman also our thanks are due for the specimens figured in the annexed plate. We have seen it since in the Collection of William Pilkington, Esq. Whitehall; who recently found it in the river near Hungerford in Berkshire.

Dr. Maton, in his remarks on this species, says, "It does not appear to have been described, and probably was never seen by Linnæus, nor has it been noticed by any English writer on Conchology; a figure, however, of it occurs in *Gualteri's Index, Testacrum. Conchyliorum* (*Tab.* 7. *fig. C. C.*) but has been referred to by Professor

PLATE LXIV.

[illegible]ring this ambiguous Shell to the Tellina genus, we may [illegible] [illegible], as it does not sensibly possess every characteristic of [illegible] yet we consider less impropriety in altering the genera than [illegible] [illegible]ing it as a trigonella.

This Shell has been admitted as the Venus borealis of Linnæus and from the synonyms of Lister's figure, not without probability. We do not, however, think the Linnæan descriptions agree sufficiently [illegible] a variety of it, though we hesitate [illegible]

Bonnet has described this Shell twice, the old Shell is Tellina Crassa, No. 36, and the young one Venus borealis, No. 52 of that author; he adds indeed "the *Tellina crassa* has the habit of Venus borealis, but its sides are unequal, one being more extended than the other."

Dr. Coste has been under similar difficulties, he gives it as a species of his genus trigonella, though he says in the general description, that "the hinge of this kind is of a *different structure from the* TRIGONELLAE, for it consists of two minute, thin, plate-like, parallel teeth, aside of which is a large triangular cavity, and has no lateral teeth."

Common on several of the English shores.

PLATE LXIV.

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Gmelin, in his edition of the Systema Naturæ of Linnæus for *Tellina cornea*, though it evidently differs from the latter in shape, which Linnæus considers as one of the most certain *criteria*, whereby species are to be distinguished. *Gualtieri* mentions the Shells alluded to as "*Musculus fluviatilis, striatus, subflavus pellucidus*," which is a vague and imperfect description, and by no means sufficient to shew in what respect it differs from T. cornea." The difference consists chiefly in the T. rivalis being of a more oblique and subovated form, and in having the hinge near one end; T. cornea is somewhat globose, and in particular has the hinge and beaks placed in a more central manner.

Dr. Maton has generally found Tellina rivalis on chalky parts of the bed of the river Avon, and in rivulets communicating with it near Salisbury; but has never seen it in any considerable abundance. He conceives, that if diligently sought after, it may be discovered in most rivers and streams which are inhabited by *Tellina cornea*.

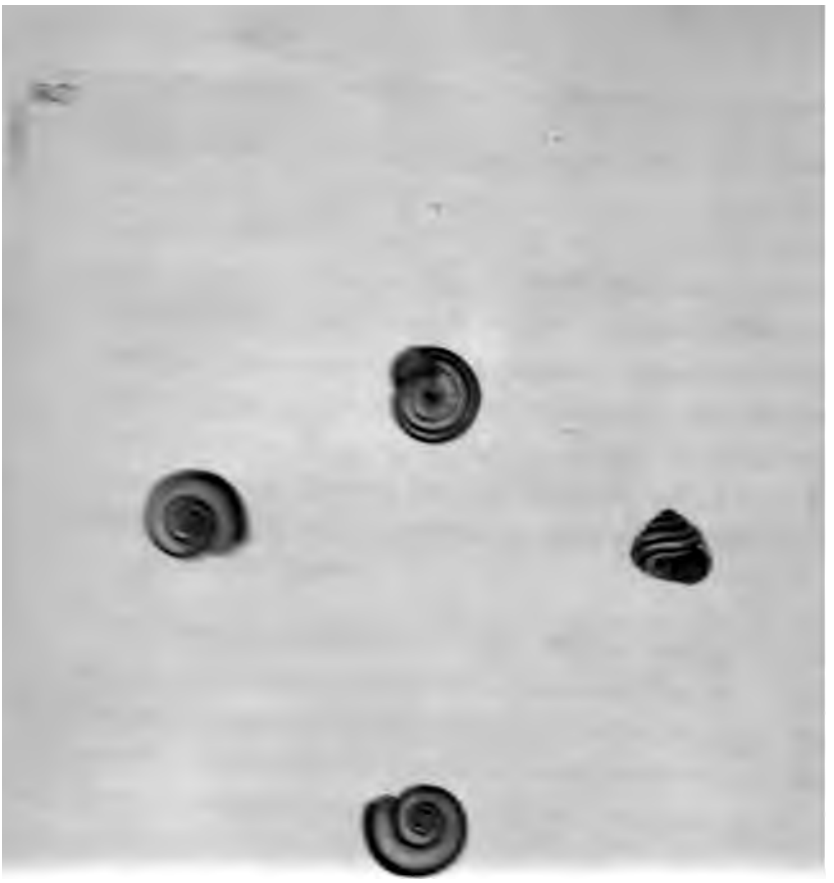

PLATE LXV.

HELIX ZONARIA.

STRIPED SNAIL.

GENERIC CHARACTER.

Aperture of the mouth contracted, and lunulated.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell whitish, striped, convex, rather depressed. A deep round central umbilicus. Outer lip of the mouth turned backward and spread.

HELIX ZONARIA: testa umbilicata convexa depressiuscula: apertura oblongiuscula marginata. *Linn. Syst. Nat. p.* 1245. *No.* 681.—*Gmel. Linn. Syst. Nat.* 3632. *sp.* 63. *Gualt.* 1. *Conch. tab.* 3. *fig. L.L.L.*

Cochleola alba fasciata cantabrigiensis, umbilico parvo. Newmarket Heath Shell. *Petiv. Gaz. tab.* 17. *fig.* 6.

Cochlea alba leviter umbilicata pluribus fasciis circumdata, clavicula productiore. *List. H. Conch. tab.* 59. *fig.* 56.

Cochlea umbilicata alba virgata. Virgata. *Da Costa. Br. Conch. p.* 79. *tab.* 4. *fig.* 7

PLATE LXV.

The Shells figured in the annexed plate are the true C. virgata of Da Costa, but not the Helix Zonaria of Pennant, as that author has erroneously considered them in his British Conchology. It appears that the latter species came into the possession of Da Costa after the work was published, for it stands corrected in some Mss. notes in his collection, though it is not noticed in his publication. Gmelin in his Systema Natura admits Da Costa's Shell as the Linnæan Zonaria; Pennant's Shell is not described by either author.

It inhabits dry sandy soils and banks, and, as Da Costa observes, is common only in some parts, as in the grass on Heddington-heath in Oxfordshire, and in Hampshire in plenty. It is also found in Cornwall, and was met with by Petiver on Newmarket-heath in Cambridgeshire.

PLATE LXVI.

BULLA PALLIDA.

PALE, OR CYLINDRIC BULLA.

GENERIC CHARACTER.

Shell suboval. Aperture oblong, very patulous, and smooth or even. One end rather convoluted.

SPECIFIC CHARACTER.

Cylindric, white, glossy, four prominent wrinkles on the pillar lip.

BULLA PALLIDA: testa cylindrica, spira elevata acuta. *Linn. Mus. Reg. p.* 588. *No.* 223.

Voluta pallida testa integra oblongo ovata, spira elevata columella quadruplicata. *Linn. Syst. Nat. p.* 1189. *No.* 405.

Concha veneris, exigua, alba, vere cylindracea. *List. H. An. Angl. tab.* 714. *fig.* 70.

Porcellana integra admodum tenuis, fimbriata; dorso pulvinato, candidissima. *Gualt.* 1. *Conch. tab.* 15. *fig.* 4.

Bulla, cylindracea, cylindric. *Penn. Br. Zool. No.* 85. *tab.* 70. *fig.* 85.

Bulla exigua cylindracea, lævis et nivea. *Da Costa Br. Conch. p.* 30. *sp.* 16. *tab.* 2. *fig.* 7.

PLATE LXVI.

Bulla cylindricea is esteemed a very rare species by collectors of English Shells. It is found on the western coasts of England. Da Costa received them from Cornwall and Weymouth; and Lister notes them from Barnstaple in Devonshire.

The smallest figures denote the natural size.

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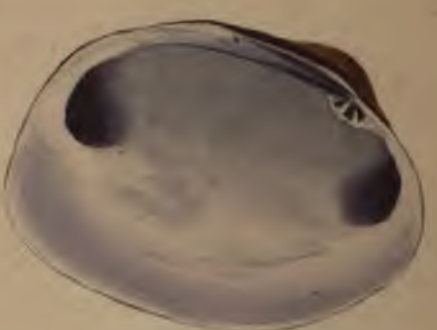

PLATE LXVII.

VENUS DECUSSATA.

RETICULATED.

GENERIC CHARACTER.

Bivalve. Hinge furnished with three teeth; two near each other, the third divergent from the beaks.

SPECIFIC CHARACTER

AND

SYNONYMS.

Somewhat oval, wrought with transverse and longitudinal striæ, or prominent ridges, which cross or decussate each other; outside brown, inside white, with violet spots near the hinge.

Cuneus reticulatus, longitudinaliter et transversim vel decussatim striatus, subrufus, intus ex parte violaceus. Reticulatus. Reticulated Purr. *Da Costa Br. Conch. p.* 202. *tab.* 14. *fig.* 4. 4.

VENUS DECUSSATA: testa ovata antice angulata decussatim striata. *Linn. Syst. Nat. p.* 1133. *No.* 149. *Mus. Reg. p.* 509. *No.* 77?

Concha quasi rhomboides, in medio cardine utrinque circiter tribus exiguis denticulatis donata. *List. H. An. Angl. p.* 171. *tit.* 20. *tab.* 4. *fig.* 20.

PLATE LXVII.

Chama fusca striis tenuissimis donata. *List. Hist. Conch. tab.* 423. *fig.* 271.*

Chama Purrs anglice dicta, et Tellina fasciata compactilis radiata intus ex parte subaurea, interdum subpurpurea. *List. Exercit. Anat.* 3. *p.* 25. 27. *tab.* 3.—*Wallace Orkn. p.* 42.—Chama nostras striis capillaceis. *Mus. Petiv. p.* 83. *No.* 811.

Purra fasciata et radiata. Cornwall Purr. *Petiv. Gaz. tab.* 95. *fig.* 8.—Chama, Purrs. *Dale Harw. p.* 387. *No.* 5.

Venus litterata, lettered. *Penn. Brit. Zool. p.* 96. 53.

The young Shells of this species vary considerably in their colours and markings, but are in general remarkable for their elegance; as they encrease in growth, those colours and markings gradually fade, and in old Shells become altogether obscure. It is found in plenty on most of the southern coasts of England and Wales.

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* Gmelin makes a new species of Lister's shell in the Systema Naturæ, under the name *obscura*, without noticing any other author who describes the same kind "*Vasa obscura* testa fusca: striis perpendicularibus tenuissimis, p. 3289. sp. 99."

radiated and figured with a chestnut brown, but in some instances they vary to an uniform brown or orange, obscurely spotted with black.

Da Costa is the only English author who notices this species.

PLATE LXVIII.

VENUS STRIATULUS.

STRIATED.

GENERIC CHARACTER.

Bivalve. Hinge furnished with three teeth; two near each other, the third divergent from the beaks.

SPECIFIC CHARACTER.

Shell somewhat heart-shaped, and marked with three or four longitudinal rays of brown.

PECTUNCULUS STRIATULUS parvus transversim striatus fusco radiatus. *Da Costa. Br. Conch. p.* 191. *sp.* 27. *tab.* 12. *fig.* 2. 2.

Venus Gallina testa subcordata radiata: striis transversis obtusis, cardinis dente postico minimo, margine crenulato. *Linn. Syst. Nat. p.* 1130. *No.* 119.—*Fn. Sv.* 2. *No.* 2143?

This is one of the most elegant of the British Shells. It is found on the coasts of Dorsetshire, Cornwall, and the isles of Scilly, and also on those of Wales. The general colour is pale flesh colour,

radiated and figured with a chestnut brown, but in some instances they vary to an uniform brown or orange, obscurely spotted with black.

Da Costa is the only English author who notices this species.

PLATE LXIX.

PHOLAS PARVUS.

SMALL PIDDOCK.

GENERIC CHARACTER.

Animal ascidia. Shell bivalve, opening wide at each end, with several lesser valves at the hinge. The hinges folded back and connected by a cartilage.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell oval, thin, wrought with transverse wrinkles, and divided down the middle by a furrow. The half next the hinge undulated or indented. A slender and oblique curved tooth in the cavity under the beak. Size of a hazel nut.

Pholas Parvus. Little. *Pen. Br. Zool. sp.* 13.

PHOLAS PARVUS: simillima tota structura Pholade Bifronte. *Da Costa Br. Conch. p.* 247. *sp.* 67.

This shell was first described by Pennant in his Zoology; he says it very much resembles the Pholas crispatus but is never found larger than a hazel nut. Da Costa describes it also, but doubts whether it

is a diſtinct species or only a young shell of that kind. As both authors have however figured and described it separately, we have given it a place as a distinct, or at leaſt doubtful species.

Pennant says he found these shells in masses of fossil wood in the shores of Abergelli in Denbighshire: the bottom of their cells were round and appeared as if nicely turned with some instrument. According to this author they will also perforate the hardest oak plank that is accidentally lodged in the water. Da Costa says they are found in great quantities on the same coasts as the other kind (Pholas crispatus) nitched in the rocks and stones, and adds that there is an amazing abundance at Scarborough and Whitby in Yorkshire, nitched in the Alum and other stones.


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PLATE LXX.

MYTILUS BARBATUS.

BEARDED MUSCLE.

GENERIC CHARACTER.

The hinge toothless, and consists of a longitudinal furrow.

SPECIFIC CHARACTER

AND

SYNONYMS.

Short, ventricose, obtuse, ferruginous yellow. An oblique space extending from the hinge to the apex, covered with a rude epidermis and irregular filaments.

MYTILUS BARBATUS: testa læviuscula ferruginea exterius apice barbata. *Fn. Suec.* 2157. *Gmel. Linn. Syst. Nat. p.* 3353. *sp.* 10. *Chemn. Conch.* 8. *t.* 84. *f.* 749.

In trawling for marine productions in the Straits that divides Caernarvon from Anglesea (Menai) last summer, we found several specimens of the Mytilus barbatus of a much larger size than any hitherto

described by authors, as the figures in the annexed plate will fully express.

Da Costa has not noticed this species, though it must have been known to him from the figures and descriptions in Pennant's Zoology, where it stands under the name of M. Curtus. *sp.* 76. *A*. Short. Pennant's specimen scarcely exceeds the size of the second specimen figured in our plate;—it was described from a Shell in the Portland Cabinet, that had been taken at Weymouth.

Linnæus mentions this species in the Fauna Suecica. Gmelin quotes the Works of Chemnitz for its figure, where it appears somewhat smaller than in those of Pennant. It is certainly very scarce.


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PLATE LXXI.

TURBO LINEATUS.

STREAKED.

GENERIC CHARACTER.

Animal Limax. Univalve, spiral, or of a taper form. Aperture somewhat compressed, orbicular, entire.

SPECIFIC CHARACTER.

Somewhat conic. Ash colour variegated with fine streaks and irregular marks of black; a rude tooth at the top of the pillar.

TURBO LINEATUS: trochiformis cinereus lineis aut lituris nigris insignitus, columella subdentata. *Da Costa Br. Conch. p.* 100. *sp.* 56. *tab.* 6. *fig.* 7.

We believe this species is rather an uncommon, or at least local kind on the British shores, though Da Costa says it is found on the coasts of Devonshire, Cornwall, Dorsetshire, Pwllhely in Caernarvonshire, and in plenty on the coasts of Norfolk. The collection of that author contains but a single specimen, it is a worn Shell and indifferently expressed by the figure above quoted. The most characteristic Shells of this species we have seen, we found on the rocky

shores of Aberfraw, on the western side of Anglesea, and at Manachty the remotest part of the same island.

This Shell is large, thick, and conic or shaped like a trochus. The general colour is ashen with little variation, the lines in some are dark or almost black, in others of a pale brown, or brown tinged with red; when the external covering is worn off the Shell appears of a fine mother of pearl.

Turbo lineatus is not described by any English Author except Da Costa.


1
2
1
2

PLATE LXXII.

TURBO PERVERSUS.

REVERSED, OR OAT.

GENERIC CHARACTER.

Animal Limax. Univalve, spiral, or of a taper form. Aperture somewhat compressed, orbicular, entire.

SPECIFIC CHARACTER.

Taper, somewhat transparent. Spires turn from left to right. Mouth jagged or beset with teeth.

TURBO PERVERSUS: testa turrita pellucida, anfractibus contrariis apertura edentula. *Linn. Syst. Nat. p.* 1240. *No.* 650.

Cochlea testa pellucida oblonga, spiris decem sinistrorsis, apertura subrotunda. *Linn. Faun. Suec.* 1. *p.* 372. *No.* 1300. 2. *No.* 2172.

Buccinum pallum, opacum, ore compresso, circiter denis spiris fastigiatum. *List. H. An. Angl. p.* 123. *tit.* 10. *tab.* 2. *fig.* 10.

Buccinum exiguum pullum duodecim orbium. *List. H. Conch. tab.* 41. *fig.* 39. *Maj. et. min.*

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Buccinum alterum pellucidum subflavum, intra senas circiter spiras mucronatum. *List. H. An. Angl. p.* 124. *tit.* 11. *tab.* 2. *fig.* 11.—*Phil. trans. No.* 105. *fig.* 11.

The small Whirl Snail, with numerous rounds, and winding from the mouth towards the right hand. *Grew. Mus. p.* 132.—*Morton Northampt. p.* 415.—Et Buccinum heterostrophum minutum fuscum sex spirarum ore subrotundo. *Id. p.* 416. *tab.* 13. *fig.* 1.

Buccinulum Anglicum heterostrophon oblongum striis capillaceis. *Petiv. Mus. p.* 65. *No.* 703.

Turbo perversus. Reversed. *Penn. Br. Zool. No.* 116. *tab.* 82. *fig.* 116.

Strombiformis parvus pullus, ore compresso, anfractibus contrariis striatis. PERVERSUS, Reversed Oat. *Da Costa Br. Conch. p.* 107. *tab.* 5. *fig.* 15. 15.

This is one of the heterostrope Shells, or such as have the mouth placed on the right side instead of the left, as is usual in most species. In general, heterosphe Shells are mere accidental varieties only of such as turn in the usual manner*; but in the present instance, it constitutes a striking character of the species itself.

It is a matter of some difficulty to reconcile the various opinions of authors respecting the several varieties and growths of this species; Da Costa has entered into the enquiry; and the result of his remarks appear at least satisfactory to us.

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* Reversed shells of the common garden snail have been found, though very rarely. One is mentioned by Dr. Latham in his Synopsis of Birds.

PLATE LXXII.

"These smaller ones," says Da Costa, "are the young Shells, but always with them are found old ones of double or treble the size; in every other respect like these, but proportionally larger and stronger in their several parts and work. The plaits or foldings near the mouth are deep and very strong; the striæ stronger and more distinct; the border round the mouth greatly turned outwards, very broad, flat, thick, milk white, and the sinuosities, jags or teeth, within, are large, white, and very conspicuous; some are bidentated, and most of these old ones have eleven, and some even twelve spires.

"From these circumstances, authors run into confusion, by making the different growths different species. The accurate and judicious Lister himself has formed two species, in his tit. 10. and 11. on the difference of the number of the spires and other slight particulars. The several figures in Gualtieri are only varieties; and the bidens of Linné, Syst. Nat. p. 1240. No. 649. and of Mr. Pennant, Brit. Zool. No. 117. tab. 81. fig. 117. is apparently no other than an old Shell, for such large and bidentated ones I have not unfrequently found nestled with these common smaller Shells.

"Though the number of spires in a Shell is a criterion, yet it is not an infallible one, for the number of spires vary in some species, either from the growths or sexes: in such cases the young Shells have always a less number, and the males have their spires less numerous than the females. This very species is, perhaps, as strong an instance of the difference in the number of the spires as can be, for it is found from six to twelve spires, as Linné has also noted in his Fauna Suecica."

Linnæus, and Gmelin in his last Systema Naturæ, distinguish the

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two species Bidens and Perversus chiefly by the number of teeth. The latter is described with three teeth, the former of course with only two. Fig. 1. 1. denotes the natural size. Fig 2. magnified.

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